JULY 1957

American MILK REVIEW

Edward V. Allen
Fifty Years A Salesman

RESALE PRICE CONTROL, *Is It a Necessary Companion to a Federal Order?*
Story on Page 28

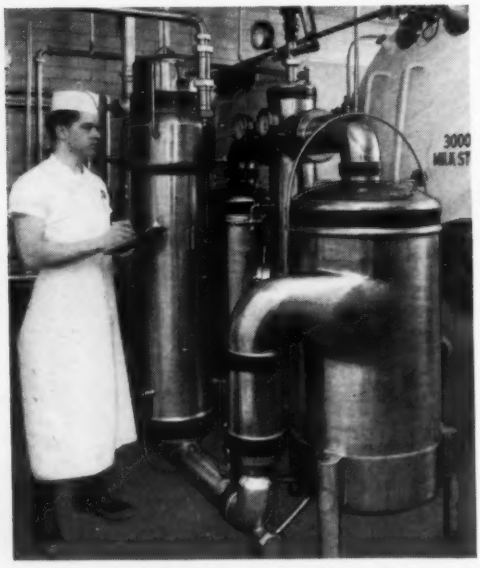
UNIVERSITY OF IDAHO

AN URNER-BARRY PUBLICATION

To keep them smiling . . . their parents buying . . . safeguard product flavor in a VACREATOR

Here's the "panel" that controls purchase of your dairy foods. Pass *their* taste test with milk, butter, ice cream and cheese that taste rich, sweet and clean *in every season* . . . and their parents will continue as satisfied customers.

It's so simple to do . . . and good business, too . . . when you process your products in a Vacreator—Cherry-Burrell's 3-chamber vacuum pasteurizer. For continuous, high-temperature Vacreator pasteurization not only safeguards taste by eliminating off-flavors, but also assures lower bacteria counts and longer shelf life.



VACREATOR VACUUM PASTEURIZER. Three vacuum chambers for high-temperature pasteurization, heavy-intensity flavorization treatment. Three sizes: 4000, 8,000, and 25,000 lb./hr.

Market Milk always tastes sweet, clean, rich . . . always tastes the same . . . when you safeguard flavor in a Vacreator.

Ice Cream. Instant flash, continuous mix pasteurization in a Vacreator retains natural ingredient flavors.

Butter. Process your cream in a Vacreator and butter has a more uniform quality, better flavor, longer shelf life.

Cheese. Vacreator pasteurization removes air and carbon dioxide from milk, facilitates development of acid, assures uniform high-quality cheese.

For complete information, write for Bulletin G-500.

CHERRY-BURRELL
CORPORATION

427 W. Randolph Street, Chicago 6, Ill.

Dairy • Food • Farm • Beverage • Brewing • Chemical • Equipment and Supplies

SALES AND SERVICE IN 58 CITIES—U.S. AND CANADA

XUM

give your glass a truly cushioned ride!

Cumberland

DELIVERY CASES

For Square Glass Bottles

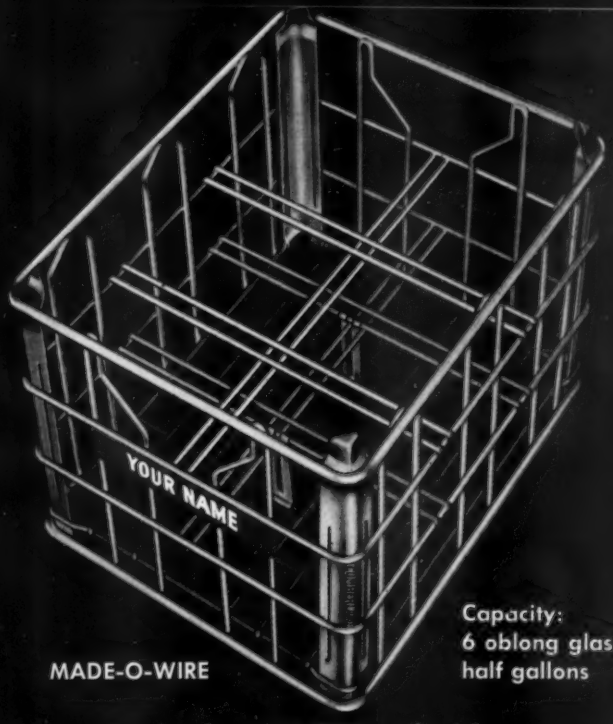
The NEW wire case with a floating bottom . . . not welded to sides but suspended at the 4 sheet steel corners by the unique method shown at right. This gives a bottom that flexes with jolts and bumps rather than transmitting the shock to the bottles. Made in all standard bottle sizes. Available in hot dip, electroplate or new pre-galvanized finish.

For additional information, see your jobber or write us for descriptive literature and prices for your specific requirements.

CUMBERLAND CASE COMPANY
CHATTANOOGA, TENNESSEE

ENGINEERED CCC PRODUCTS

LIBRARY
UNIVERSITY OF IDAHO



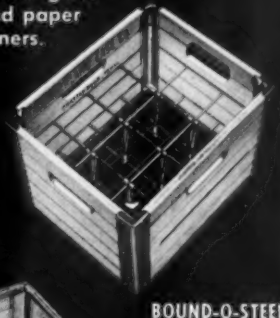
MADE-O-WIRE

Capacity:
6 oblong glass
half gallons

Close-up of bottom corner illustrates the unique method of suspending bottom from the four steel corners

Manufacturers of a complete line of wire —and hardwood and steel cases for both glass bottles and paper containers.

MADE-O-WIRE
16 Quart or
9 Half-Gallon
For Paperboard
Containers



BOUND-O-STEEL
Quart 3x4 Case For
Glass Milk Bottles

BOUND-O-STEEL
20 Quart Case
For Paperboard
Containers

XUM

Thatcher cottage cheese premiums with "Women-Appeal"

Who are your cottage cheese customers? Women, of course! And here are two Thatcher premiums with "women-appeal"—(1) famous French Casseroles (reusable for baking, etc.) which moved over 1,112 tons of cottage cheese and (2) the Colonial Casseroles, also reusable for baking, refrigerator dish, etc.

Colonial Casserole

6 colors: Bermuda Green, Mist Blue, Coral, Petal Pink, Charcoal and Heather Yellow. Capacity: 12 ounces. Metal or Polyethylene caps available.

French Casserole

6 colors: Sunny Yellow, Fiesta Red, Dawn Gray, Pastel Green, Royal Burgundy and Skylark Blue. Capacity 12 ounces. Metal lids available.

Six different pastel colors make these smart premiums a profitable 6-week promotion. Complete merchandising plans include: full-color leaflets, point-of-purchase displays, eye-catching streamers, truck cards, newspaper mats and radio-TV scripts. Get full details—mail the coupon today.

CLIP AND MAIL COUPON!

THATCHER GLASS Manufacturing Co., Inc.
10 GRAND CENTRAL AVE., ELMIRA, N. Y.

Rush details on your cottage cheese premiums. I'm interested in ☐ Colonial Casserole ☐ French Casserole

Name _____ *Title* _____

Dairy _____

Street _____

City _____ *State* _____

NORMAN MYRICK ..... Editor

HERBERT SAAL ..... Assistant Editor

EDITORIAL ADVISORY BOARD

BERT ROELOF
Roelof's Dairy
Galesburg, Michigan

J. J. SWANER, President
Swaner Farms Dairy, Inc.
Iowa City, Iowa

WARD K. HOLM
Indiana Dairy Products Ass'n
Indianapolis, Indiana

American MILK REVIEW
An Urner-Barry Publication

* HAROLD E. TABER ..... Chairman of the Board
* JOHN C. TABER ..... President
* PAUL H. TABER ..... Vice-President
* GORDON URNER ..... Vice-President
* RAYMOND H. TABER ..... Treasurer
* ARTHUR A. BUTTERWORTH ..... Secretary
Address of the officers and publication is the same.

NORMAN MYRICK ..... Editor
Herbert Saal ..... Assistant Editor
*William S. Stinson ..... Director of Advertising
*John F. Struse, Jr. ..... Sales Manager
*Robert H. Wynne ..... Advertising Manager
*D. E. Spurgeon ..... Production Manager
*Raymond H. Taber ..... Circulation Manager

*Mid-Western Representative—Guy W. Whitcomb
520 No. Michigan Ave., Chicago 11, Ill.
Tel.: SUperior 7-1043

Member
BPA

United States, Canada, and U. S. Possessions ..... Subscription $3.00 per year
Foreign ..... $5.00 per year

Contents for July, 1957 *Vol. XIX No. 7*

General Interest

Editorial, Quality 20
50 Years A Salesman 24
By Norman Myrick
What Does Social Security Mean To You? 76
By Allan J. Parker

Management

Resale Price Control 28
By Dan Wettlin, Jr.
Some Fundamentals of Organization 62
By T. B. Robertson
When Does Peaceful Picketing Become Illegal? 70
By Albert W. Gray
How Route Analysis Saves The Profits 80
By Robert P. Bowler
Right or Wrong In Labor Relations 92

Plant

Milk Meters Increase Plant Efficiency 36
By Herbert Saal
Closed Circuit Television In Toledo Plant 38
Bulk Tanks Reach 60,000 Mark 44
By Herbert Saal
Industry Problems 50
By V. H. Neilsen
Plant Clinic 54
By J. C. White and R. F. Holland
Butter Grading Prior To Shipment 58
By E. A. Giermak
Truck Talk .....
How To Figure Horse Power 60
Truck Body Can Be Raised or Lowered 74
Oxidized Flavor Development in Milk 96
By Edmund Lusas

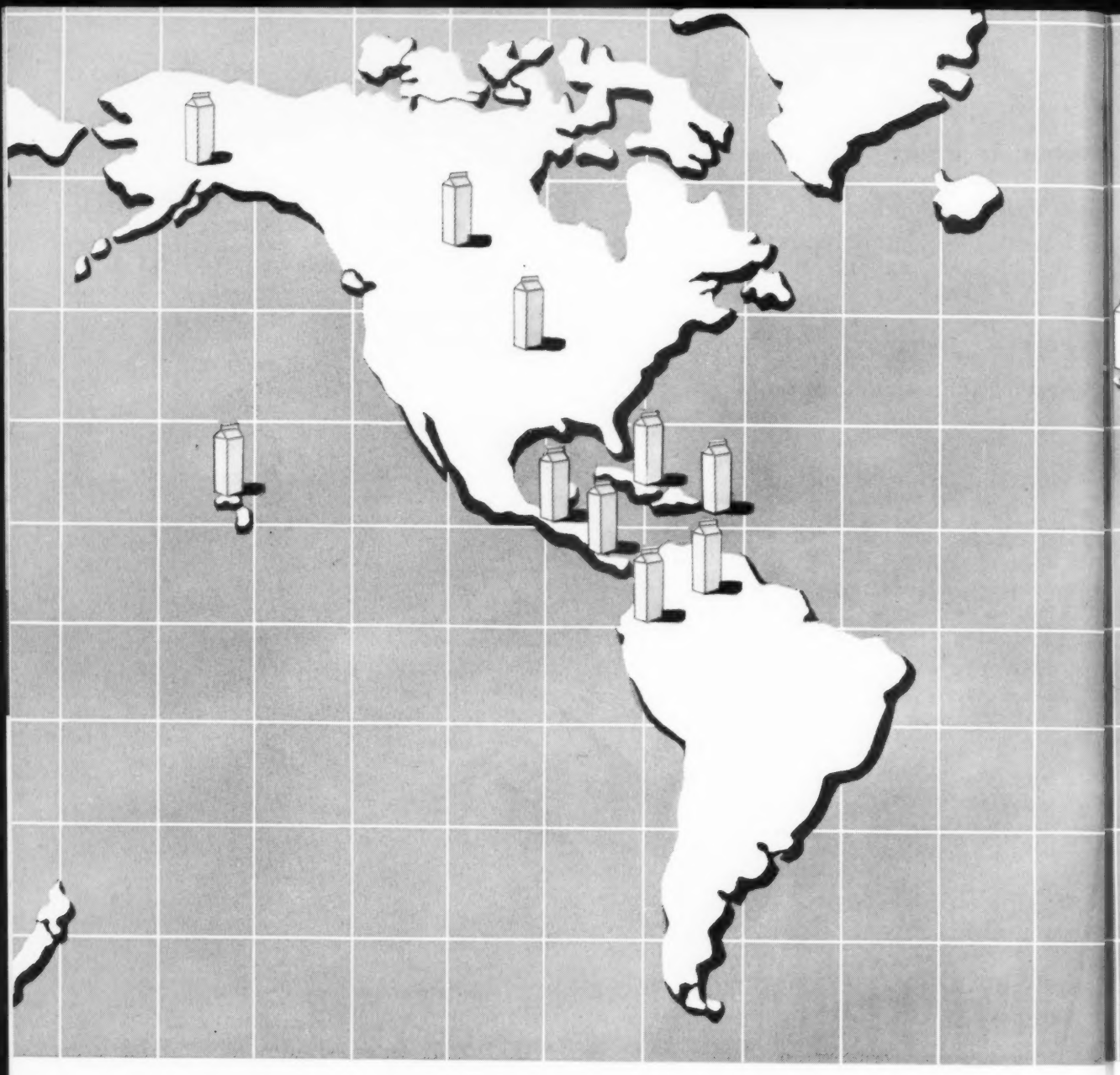
Sales

Price Wars Are Folly 40
By Raymond J. Watson
Bulk Milk Dispensers In School Milk Program 66
By Jeanette Hampton

Where to Buy It

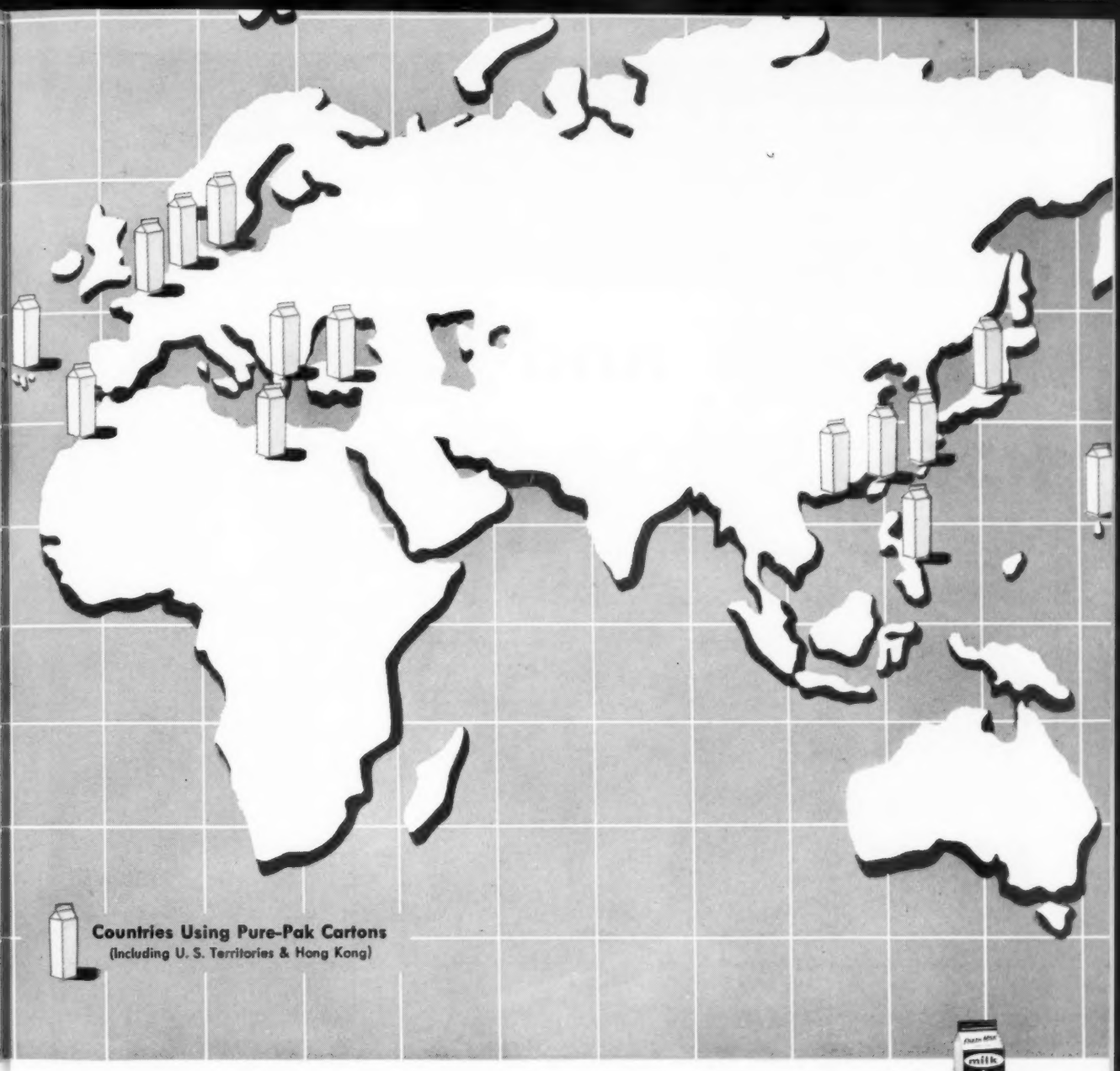
Wants and For Sales 112
Index To Advertisers 116

published monthly by the urner-barry company
92 warren street ● new york 7, n. y.



Pure-Pak . . . the New S
of Milk Packaging
Around the World!

TWENTY MILLION TIMES A DAY SOMEONE BREAK THE

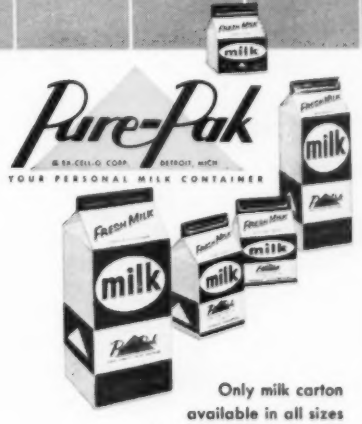


Countries Using Pure-Pak Cartons
(Including U. S. Territories & Hong Kong)

w Standard

Today dairymen in 24 countries are enjoying efficiency and economy of packaging and distributing milk in modern Pure-Pak cartons.

EAK! *THE SEAL ON A FRESH PURE-PAK CARTON*



Only milk carton
available in all sizes
½ pint through ½ gallon

for further information write ,
Pure-Pak Division
Ex-Cell-O Corporation
Detroit 32, Michigan

XUM

AMERICAN DAIRY ASSOCIATION

Campaign Plans FOR AUGUST

Milk and Butter Ideas for Summer

NEW BUTTER IDEA–
Butterburgers!
Juiciest burgers you ever tasted . . . satisfying, beefy flavor with butter goodness– plus more burgers from every pound. Butter plus cottage cheese in this new recipe increases volume while improving flavor.
FIRST – Melt 5 tablespoons butter in skillet. In mixing bowl mash ½ cup cottage cheese with fork. Add 1 egg, ¼ teaspoon dry mustard, ¾ teaspoon salt, ⅛ teaspoon pepper, 1 teaspoon Worcestershire sauce, 3 tablespoons melted butter taken from skillet.
SECOND – Beat with rotary beater until well mixed. Add 1 pound lean ground beef. Mix thoroughly with a fork. Make four burgers using full ½ cup of mixture for each. Shape gently just until desired form is attained.
AND THEN – Brown on both sides in skillet over medium heat. When meat is done brush buns with butter-drippings. Toast under broiler quickly. Serve burgers on butter-
AMERICAN DAIRY ASSOCIATION Chicago
Representing the dairy farmers in your area
See "Disneyland" on ABC-TV
You never outgrow your need for foods made from milk

ABOVE. Great way to beat the heat—Refresh with Milk. We're telling it with this two-page spread in *Life* on August 5 plus a one-page ad in August Reader's Digest. These two ads will carry the "Refresh with Milk" idea to more than 60 million people—the newest insertions in a year-round campaign.

RIGHT. A brand new taste treat—Butterburgers. Real butter makes 'em juicier and better tasting. Homemakers will read all about this *new* use for butter in August Better Homes & Gardens going into more than four million homes.

Six Commercials on Disneyland

There'll be four commercials—one every week—selling the "Refresh with Milk" idea, plus two commercials on real butter and corn on the cob.

You never outgrow your need for foods made from milk

Selling more dairy foods to more Americans

AMERICAN DAIRY ASSOCIATION · Chicago

© 1957, AMERICAN DAIRY ASSOCIATION

capacities up to 20,000 lbs. per hour!

14 to 16 hour runs without cleaning!

incredibly low fat losses!

NEW! DE LAVAL HIGH CAPACITY Hot Milk Separators

Here is the greatest advance in milk plant centrifugal design history. These two new De Laval Hot Milk Separators give you not only tremendous capacity . . . but the cleanest skimming ever—.06 by Mojonnier, under normal operation! All "300" Series stainless steel . . . "Air-Tight" . . . with low inlet pressure and horsepower . . . they have all the outstanding features and compactness of De Laval "300s."

This is what the new De Laval Hot Milk Separators can mean to you in savings . . . and added profits! . . .

- **SAVE WORK!** Cuts down clean-up costs by giving single runs of 14 to 16 hours—without cleaning—and without any increase in fat loss during run!
- **SAVE BUTTERFAT!** With new skimming efficiency you save butterfat and increase profits.
- **SAVE POWER!** No increase in motor size. The 392-H uses a 3 h.p. motor—the 372-H a 2 h.p. motor.
- **SAVE SPACE!** Installing one machine instead of two saves space —plus considerable piping and installation expense.

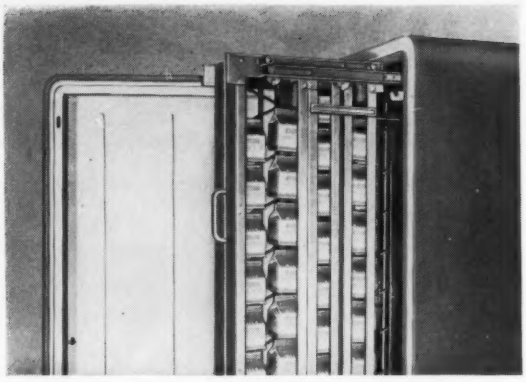
Get all the facts today!

NEW DE LAVAL "392-H" HOT MILK SEPARATOR	NEW DE LAVAL "372-H" HOT MILK SEPARATOR
CAPACITY—20,000 lbs. per hour.	CAPACITY—12,000 lbs. per hour.
LOW INLET PRESSURE—45 psi at 20,000 lbs. per hour.	LOW INLET PRESSURE—30 psi at 12,000 lbs. per hour.
NO INCREASE IN HORSEPOWER—3 HP drive.	NO INCREASE IN HORSEPOWER—2 HP drive.
ALL "300" SERIES STAINLESS STEEL.	ALL "300" SERIES STAINLESS STEEL.
"AIR-TIGHT".	"AIR-TIGHT".

DE LAVAL SEPARATOR COMPANY

THE DE LAVAL SEPARATOR COMPANY Poughkeepsie, New York • 427 Randolph St., Chicago 6 • DE LAVAL PACIFIC CO. 201 E. Millbrae Ave., Millbrae, Calif.

LOADING IS A SNAP. Routeman slides rack out, removes retainer bars. Then he stacks the cartons in place and puts back retainer bar. All done in minutes—quickly and simply.



INTERIOR MECHANISM IS SIMPLE. You will cut service calls to a money-saving minimum because the machine is so simple. There are no belts, no conveyors.

NORRIS 3-DRINK VENDER SELLS MERCHANDISE . . . makes more money for you. The lighted vender front attracts customers. The simple coin drop helps them make correct selections. You can gain more locations, more sales with this machine.

NORRIS 3-DRINK CARTON MILK VENDER CAN MAKE MORE MONEY FOR YOU

You can move more merchandise with this new vender. Two special features have been built in to increase your profits.

The cool-looking dairyland scene lights up to form a colorful setting for the window display of products you vend.

The simple coin drop invites initial and repeat sales. Gone are the levers, buttons and dials. Customers' errors are virtually eliminated because this vender is so simple to operate.

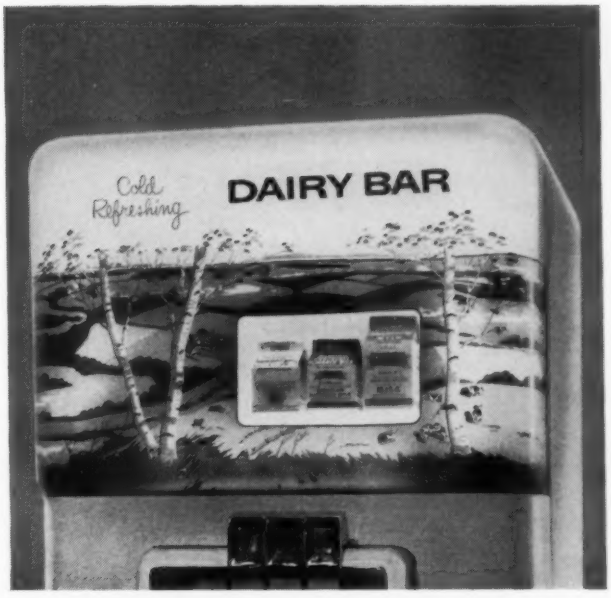
This handsome machine will earn new locations for you and keep your established locations sold.

Norris Venders have become known for rugged construction that rarely needs service. Now, with new lighted front and new simple coin drop, this Norris 3-Drink Vender is the machine you want to make you more money.

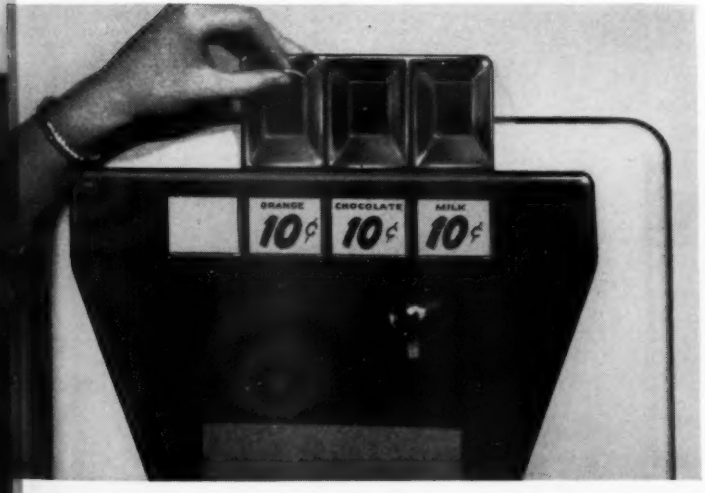
NORRIS 3-DRINK VENDER
from the greatest name in milk dispensing

NORRIS DISPENSERS, INC.
2720 Lyndale Ave. So., Minneapolis 8, Minnesota

Write today for new **FREE** brochure: Dept. AMR67



NEW VENDER FRONT LIGHTS UP. Colorful dairyland scene stops customers, starts sales of the products displayed in the window. Panel itself is made of chip-proof plastic, back lighted for impressive effect.



NEW COIN DROP IS SIMPLEST BUILT. Customers select each drink by dropping coin in a separate channel. There are no dials, no levers, no buttons and only one coin changer. Errors are virtually eliminated.

OFFER YOUR CUSTOMERS THREE SELECTIONS. Vends any three drinks you choose—in ½ pint or ⅓ pint cartons. Capacity is 216 cartons or 168 pints.

Weigh milk, syrup, water with BALDWIN SR-4® LOAD CELLS

Reduce wasteful overruns

R-4 Load Cells are compact and easy keep clean. Simply installed under nks, bins, vats or hoppers, they sense eight instantaneously, send signals to aldwin indicator instrument. Dial can be alibrated in pounds, quarts, gallons.

MAKE YOUR MIX PROCESSING ACCURATE TO WITHIN A PINT PER 100 GALLONS

The modern way to measure! Accurate, economical, Baldwin SR-4 Load Cells mounted under assembly, flavor or storage tanks *always* give you correct weight. No mere approximation, but accurate readings with an error factor as low as ±1/10%!

Hermetically sealed against moisture and temperature changes—virtually maintenance-free—no moving parts to wear out or break down—load cells are ideal for dairies and ice cream plants.

Let a B-L-H representative show you how load cells can increase your measuring accuracy, reduce waste, save you money. Standard Baldwin SR-4 Load Cells range in capacity from 50 to 200,000 lb.

For more information on reliable Baldwin SR-4 Load Cells, write today for your free copy of Bulletin 4302, Dept. MR1.

BALDWIN · LIMA · HAMILTON

Electronics & Instrumentation Division

Waltham, Mass.

SR-4® strain gages • Transducers • Testing machines

BALDWIN BLH LIMA-HAMILTON

"Patrons Of Our Grade A Bottled Milk Plant Are DARI-KOOL Users Exclusively...!"

Writes Mr. PAT THOMAS --- THOMAS DAIRY, Black River Falls, Wis.

Patrons of our Grade A bottled milk plant are exclusively Dari-Kool users. We have been on 100% bulk operation for two and one-half years. During this time, we have never had a farmer lose a tank of milk. Our service calls have been very few in number and none have been serious. With the simple capillary tube system of refrigeration and the small compressors, we have at no time had any service calls that could not be handled by our local plant service man.

We are surely happy with the Dari-Kools used by our producers.

Signed,

Pat Thomas

See the NEW, LOW....

DARI-KOOL
BULK MILK COOLERS ®

With JUST RIGHT Pouring Height

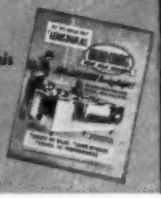
...and other new features to help you produce Better Milk -- at Greater Profit -- with Less Work!

Model shown, DKS-200 (200 gallon capacity) Also available in 100, 150, 250, 300, 400, 500, 600 and 700 gallon capacities

See Your DARI-KOOL Dealer, or Write For This

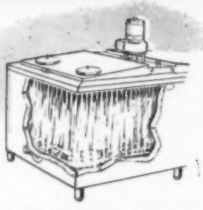
NEW FREE BOOK

About Bulk Milk Cooling



DAIRY EQUIPMENT COMPANY, Dept. R4, Madison, Wisconsin

Distributed throughout Canada by BEATTY BROS., LTD., Fergus, Ontario



DARI-KOOL'S ICE-BANK AND GLACIAL WATERFALL COOLS FAST — WITHOUT FREEZING

DARI-KOOL'S LARGE ICE-BANK PROTECTS YOUR MILK FROM SPOILAGE IN CASE OF POWER FAILURES

DARI-KOOL'S FAST COOLING ASSURES LOW MILK BLEND TEMPERATURES

DARI-KOOL TANKS ARE EASIER TO CLEAN — MOIST MILK TANK WALLS RETARD MILKSTONE

DARI-KOOL MEETS OR EXCEEDS ALL 3A STANDARDS

Why be satisfied with less?

the Sharples UNIVERSAL SEPARATOR alone Gives You

HIGHEST SKIMMING EFFICIENCY
Hot or Cold

Sharples GUARANTEES that fat losses to skim will not exceed an average of 1/100 of 1% (Babcock). In fact, hot or cold milk skimmed with the Sharples Universal Separator easily complies with the rigid specifications for skim milk powder, too.

HIGHEST HOURLY CAPACITIES

Up to 15,000 lbs./hr. hot
Up to 6000 lbs./hr. cold

Size for size . . . Sharples Universal Separators give you higher capacities—skim more milk or hot whey per hour per machine.

LARGEST SLUDGE HOLDING SPACE

. . . assures longer, more economical runs before bowl cleaning is required.

These are only three of the major advantages you enjoy with Sharples Universal Separators. Get the full story.

Write for Bulletin 1281

In every way your **BEST BUY** *is* **SHARPLES**

SHARPLES *dairy equipment division*

CLARIFIERS
SEPARATORS
STANDARDIZERS

THE SHARPLES CORPORATION
2300 WESTMORELAND STREET • PHILADELPHIA 40, PENNSYLVANIA
CHICAGO • NEW YORK • CLEVELAND • HOUSTON • SAN FRANCISCO • ST. LOUIS
Sold and serviced by reliable dealers everywhere

Producer response proves

NEW DIMENSION DESIGN OPENS NEW ERA IN BULK COOLING!

150 GAL. *NEW DIMENSION* cooler. Cooler capacities range from 100 to 700 gallons.

FROM ALL PARTS OF THE COUNTRY, a flood of inquiries is proving again and again the interest of dairy farmers everywhere in Wilson's exciting *New Dimension* bulk coolers. Never, since the introduction of bulk cooling itself, has there been so much interest generated so quickly in a new development in dairy farming.

Proving that the application of Wilson's unique combination of modern industrial design, topnotch refrigeration know-how, and twenty-five years of milkhouse refrigeration experience pays off, these inquiries indicate a sample of the interest *New Dimension* coolers are developing in your area.

To help you help your producers get information they want about these new designs, Wilson is prepared to rush data to you immediately. Why not fill out the coupon below today—or ask the nearest Wilson dealer to drop in and tell you the full *New Dimension* story.

ONLY FROM WILSON DO PRODUCERS GET ISOLATED ICE BANK COOLING

IN ADDITION TO EXCITING NEW DIMENSION DESIGN, producers want information about Wilson because they want and need the solid advantages and safety available only through Wilson's Isolated Ice Bank and Drop-In Refrigeration Unit. Advantages like greater safety for milk; less milkstone formation (thanks to moist walls); power failure protection; low-cost, simplified maintenance. It's a story you'll want to know about—and Wilson will be glad to send you complete details.

ALSO AVAILABLE: a complete line of Wilson Can Coolers, both front-opening and immersion types.

Wilson Refrigeration, Inc., Dept. AM-4, Smyrna, Delaware.
Rush information about ☐ *New Dimension* bulk coolers ☐ Wilson can coolers.

Name_____

Title_____

Address_____

City_____ State_____

WILSON REFRIGERATION, Inc.
Smyrna, Delaware
A Division of Tyler Refrigeration Corporation

New **SEAL-O-MATIC**
FULLY AUTOMATIC
FILLER

EXCLUSIVE FEATURES
mean larger profits for you!

RAPID CHANGEOVER

No tools needed . . . loosen thumbscrews, turn over, raise or lower bases to calibrations on back plate which have been custom marked to the sizes of your particular formed cartons. Very few minutes are required to change to any size, ½ gallon to ½ pint.

PRODUCT AND MECHANISM PROTECTION

Large stainless steel hoods keep machinery clean. Inner nozzle-cover keeps milk and cartons contamination free, Seal-O-Matic fulfills all Local, State, and U. S. Board of Health requirements.

IN GOES ONE—OUT COMES ONE

One position operation synchronized to the speed of the operator . . . switch control for the fully automatic processes is tripped by the insertion of the empty carton . . . no wasteful pile-ups. An efficient operator can fill up to 350 gallons per hour, any size carton.

HYDRAULIC STAPLER

No springs to jam. Single staples pitcher pour cartons.

LOCKING ADJUSTABLE CASTORS

Overall machine dimensions. 24" wide, 48" long, 62" high.

MOISTURE-FREE BONDING SURFACES

Milk cannot reach sealing surfaces, a guaranteed leakproof closure every time.

HEAT SEAL UNIT

Thermostatically controlled for temperatures of 0-550 F. for adjustments between the varying melting points of Polyethylene and wax.

GUARANTEED LEAKPROOF . . .
THE GREATEST ADVANCE IN
MILK PACKAGING

Liberal Trade-in Allowance on Your Present Filler

Contact Any of Our Jobbers

Brooks Supply Co., P. O. Drawer CC, West Monroe, La.
Brooks Supply Co., P. O. Box No. 1205, Joplin, Mo.
Brooks Supply Co., 1700 E. Chestnut St., Springfield, Mo.
Brooks Supply Co., P. O. Box No. 2446 West, Jackson, Miss.
Brooks Supply Co., 351 W. Josephine, San Antonio, Texas.
Brooks Supply Co., 415 S. Buckner, Dallas, Texas.
Sewell & Simpson Dairy Supply Co., 273 Oakland Ave., S. E., Atlanta, Ga.
Northwestern Dairy Supply, 815 Center Ave., Moorhead, Minn.
Berwick Fabricating Co., 310 W. Front St., Berwick, Pa.
Crystal Preforming, Inc., Warsaw, Ind.
Bessire & Co., Inc., 6305 Kenjoy Drive, Louisville 14, Ky.
Dairy Service, Inc., 1936 W. 33rd Ave., Denver 11, Colo.

Contact Us for Territory Rights

PURITY PACK CORP.

P. O. Box 430
WOODSTOCK ILLINOIS
Telephone: Woodstock 131

Mail this Coupon Today to Any of the Above Retail Jobbers

PURITY PACK CORP.
P. O. Box 430, Woodstock, Illinois.

Please send me, without obligation, complete information on the SEAL-O-MATIC FILLER.

NAME .....

ADDRESS .....

AMR

Now Hear This!

MILK STRIKE STORY

Dear Norman:

Just a word to say what an excellent article you did in the April issue on the milk strike story. I must admit that I have used parts of it in discussions of mine on this problem and have made copies of the article for pertinent people around this capitol.

Would it be possible to get at least one more copy of the April issue since I have sliced mine a bit in having stats made of your story?

Sincerely,

Pennsylvania

We appreciate the kind words but the story of the tragic and abortive milk strike is something we hope we never have to write about again.

—●—

HOME MILK DISPENSERS

Dear Mr. Myrick:

For a long time I have held the *American Milk Review* in high regard among trade journals. With the article "Home Milk Dispensers in Action" this regard goes down a bit.

When I first saw the entrancing picture in the ads of the smiling housewife, and the milkman with the three-gallon can of milk to put in the dispenser, I thought it was easy to look further into the picture and I think you should have done so too.

You should have made the following comparisons to give a true picture of the home dispenser:

1. Delivery to the doorstep in bottles or cartons.
2. Delivery of the 3-gallon dispenser can and installing it in the dispenser.

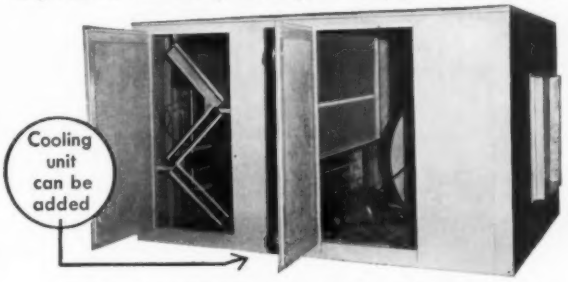
Now to look further into the pretty picture mentioned above: Frequently when the smiling milkman delivers the new can, the spare can will not be hooked up so he will:

1. Take out empty, 2. Move spare over and connect to valve, 3. Set new can in. To add another horrible thought to the above, suppose there is a little milk left in the can in use. Eureka! He waits while the housewife finds a pan, drains the milk out and then continues to Steps 1, 2, and 3. Also, instead of delivering the by-products to the doorstep, they are delivered to and put in the dairy bar compartment.

The very minimum operation is that of delivering milk and by-products into the dispenser as compared to setting it on the doorstep.

You did mention briefly the opinion of the Pennsylvania Milk Commission, but I thought you definitely soft-pedaled their findings. But more important you should have had a few of these findings yourself. I say

The new
KLIMATIC KING
a compact heating, ventilating unit
Engineered with dairy industry humidity problems in mind



Designed for dairy, ice cream and food processing plants, the Klimatic King is fabricated with a corrosion-resistant galvanized steel casing, insulated to eliminate condensation and dripping. Automatic controls for temperature and ventilation. Two speed motor for "high" and "low" production periods, provides maximum economy of operation. These and many other features are standard with the Klimatic King, not "optional extras". The quality leader in its field. Sizes 3,500 to 20,000 CFM.

Write for detailed technical bulletin. More than fifty years experience is at your disposal. Write today

THE King CO. OF OWATONNA
914 NORTH CEDAR ST. OWATONNA, MINNESOTA
MANUFACTURERS OF SHARP FREEZE, COOLING, VENTILATING AND HEATING SYSTEMS

THE ONLY *Approved* SANITARY METHOD OF APPLYING A U.S.P. LUBRICANT TO DAIRY & FOOD PROCESSING EQUIPMENT
Haynes Spray

U. S. P. LIQUID PETROLATUM SPRAY
U.S.P. UNITED STATES PHARMACEUTICAL STANDARDS

SANITARY—PURE
ODORLESS—TASTELESS
NON-TOXIC

CONTAINS NO ANIMAL OR VEGETABLE FATS. ABSOLUTELY NEUTRAL. WILL NOT TURN RANCID — CONTAMINATE OR TAINT WHEN IN CONTACT WITH FOOD PRODUCTS.

This Fine Mist-like HAYNES-SPRAY *should be used to lubricate:*
SANITARY VALVES
HOMOGENIZER PISTONS — RINGS
SANITARY SEALS & PARTS
CAPPER SLIDES & PARTS
POSITIVE PUMP PARTS
GLASS & PAPER FILLING MACHINE PARTS
and for ALL OTHER SANITARY MACHINE PARTS which are cleaned daily

THE MODERN HAYNES-SPRAY METHOD OF LUBRICATION CONFORMS WITH THE MILK ORDINANCE AND CODE RECOMMENDED BY THE U. S. PUBLIC HEALTH SERVICE . . . .

THE HAYNES-SPRAY THIN FILM LUBRICANT HAS HUNDREDS OF APPLICATIONS IN HOME & INDUSTRY
PACKED 6-12 oz. CANS PER CARTON SHIPPING WEIGHT—7 LBS.

The Haynes-Spray eliminates the danger of contamination which is possible by old fashioned lubricating methods. Spreading lubricants by the use of the finger method may entirely destroy previous bactericidal treatment of equipment

THE HAYNES MANUFACTURING CO.
709 Woodland Avenue • Cleveland 15, Ohio
ROLL-EASY DOLLIES • ROLL-EASY CASTERS • TABLE CARTS • CAN CARTS • CARRY-BASKETS
SNAP-TITE NEOPRENE GASKETS • NEOPRENE COVERED WRENCHES • "SLIP" CHAIN LUBRICANT

uniform curd
cottage cheese

Want uniform curd cottage cheese?

Use nonfat dry milk to standardize or fortify serum solids to 11%.

You get closer, more positive control over production stages—more dependable curding, less cooking and handling problems.

You obtain curds uniform in firmness, tenderness and size, from vat to vat—with nonfat dry milk.

nonfat dry milk

Get the facts. Write: Dept. A-7

AMERICAN DRY MILK INSTITUTE, INC.
221 North LaSalle Street • Chicago 1, Illinois

Get Your Free Copy!

BUILD NEW SALES VOLUME . . with proven methods described in "Short Cut To Profits."

BENNER GLASS COMPANY, premium division, 5330 Powers Avenue, Jacksonville, Florida.

Please send FREE COPY of your "Short Cut To Profits", without obligation . . . which includes full details on how we can increase sales volume through your proven methods of creating new customers as well as increasing our present customer sales volume.

Name: _____

Firm: _____

Address: _____

City: _____ Zone: _____ State: _____

you should disregard the fact of a big advertiser or else not write the article.

As to in-plant savings, I doubt there would be any when tubes, cans, parchment, re-tinning are compared against bottles and closures or cartons. Furthermore, the filling of containers is a stream-lined and fast operation as against the attaching of tubes and filling of dispenser cans.

Very truly yours,

Indiana

Gentlemen:

In the May issue of *American Milk Review* there is an article entitled "Home Milk Dispensers in Action" appearing on page 34. The statement is made in the fourth paragraph that as far as the writer knew, there was only one home milk dispenser on the market and that it was manufactured by Norris Dispensers, Inc. of Minneapolis.

As a matter of information we thought you might be interested in learning there is another very good home dispenser. The manufacturer is Stevens-Lee Company, 314 West 90th Street, Minneapolis 20, Minnesota.

Very truly yours,

Connecticut

Despite the objections raised by our Indiana friend and despite other objections that we have encountered such as sealing, can filling, washing, and can returns the firms using the home milk dispenser were unanimous in their respect for this method of distributing milk.

COST OF SHORT BLOCKS

Editor, Truck Talk

Dear Sir:

It was with much interest that I read "Truck Talk" in the May issue of AMR. However, I was disturbed over the cost involved in the purchase of short blocks for engines under 450 cubic inch displacement particularly as it applies to our Dairy Industry.

As you know a large percentage of retail milk trucks are Divco's as you illustrated, using 4 cylinder Continental and 6 cylinder Hercules engines. The best price that we have been able to obtain on a short block for these units has been $224 for the 4 cylinder and $370 for the 6 cylinder.

Based on the foregoing figures we feel that we cannot follow the short block replacement method on these units. Although we could be glad to if we could obtain them for $129.

If the $129 figure quoted is not an error, would you please advise me of the make of the block and list exactly what is delivered for that price.

Very truly yours,

Washington, D. C.

✳ TRI-TONE COLORS ON GABLE TOP GIVE YOUR PRODUCTS STANDOUT IDENTIFICATION IN DAIRY CASES!

Wherever you are...

International's complete dairyman's service package can help you. •*10 well located plants* for fast service •*Inventory Control* provides adequate stocks—economically •*Quality Control* guarantees you top quality •*Design Service*—fastest, finest in the industry •*Tri-Tone Process*—3-color designs using only 2 colors, at no additional cost •International's Pure-Pak puts Tri-Tone where customers can't miss it—on Gable Top for for eye catching cooler display.

Wherever you are, International Service Engineers are near as your phone—ready to help you. Call us.

INTERNATIONAL PAPER COMPANY
SINGLE SERVICE DIVISION, NEW YORK 17, N. Y.

EDITORIAL

Quality

QUALITY CONTROL is the practical acknowledgement of the power that quality of product exercises in the market place. It is a recognition of the fact that the final sales argument is the product itself. Simple and obvious though this concept may be its spurs were not easily won. The long term virtues of a quality product have had to compete and still do compete with the beguiling prospect of a quick profit to be turned on inferior goods.

The implications of quality are profound indeed. If quality of product is the ultimate sales argument it is also the final measure of a manufacturer's skill and integrity. He may hire the most high-powered manipulators of the public mind that his money can buy but if his product is short on quality all the sweet talk that Madison Avenue or Michigan Boulevard can concoct will not alter the customer's verdict. An organization is what its products say it is, no more and no less.

The degree to which the dairy industry has been able to develop a reputation for quality is one of its greatest triumphs. There is little doubt that the confidence in dairy foods which this emphasis on quality has produced is a major factor in the failure of potentially devastating publicity, such as the animal fat-heart-disease debate, to have much effect upon the consumption of dairy products. People equate dairy products with good health, with quality. These are impressions that have been gained over a long period of time. They are not easily destroyed.

Quality control is primarily associated with plant and procurement. It is that limited association which is at the bottom of a major problem in the modern dairy industry. For quality control is not merely a matter of farm and plant it is also a matter of sales philosophy. A sales philosophy geared to price alone must sooner or later face the reality of cost. It is impossible to maintain a policy of underselling without reaching the point where the profit margin disappears. When that happens either the company goes out of business or it dilutes the quality in order to have a margin. The net result is deterioration and the loss of a reputation which no industry, no business house, no individual can afford to lose. It is not an easy problem, but it is one upon which the future of the dairy industry will turn.

"ALL-ELECTRIC REFRIGERATION INCREASES PAYLOAD 10 CASES PER TRUCK...

WILL PAY FOR ITSELF IN ONE YEAR," says John Lietz, Twin Pines Farm Dairy, Plymouth, Michigan

"Profit from added payload plus savings on my state vehicle license will make my new all-electric truck refrigeration system pay for itself in one year. Here's how:

"First, the compactness of my new system powered by General Electric allows me to carry ten more cases of milk on my truck. That's added profit of $4.00 per day. Second, since the new system weighs 900 pounds less than the former system, I save $65.00 a year on my state vehicle license.

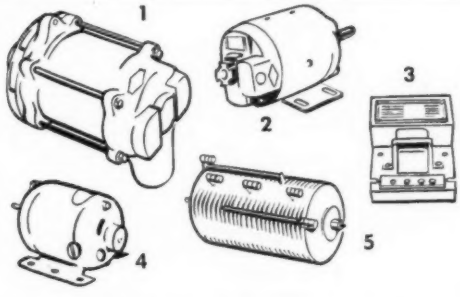
"In addition, lighter weight reduces the wear and tear on my truck body and tires and decreases gas consumption," continues Mr. Lietz.

"Also important to me is the fact that the sloppiness of ice is gone—trucks don't rust so fast. Drivers stay cleaner, look neater. And Twin Pines customers like the way our new system keeps milk so cold during the summer months. I never have to worry about spoilage.

"When drivers return from their routes at night, they just plug the units into 115-volt outlets for the night. No unloading is necessary."

To see how *you* can benefit from all-electric truck refrigeration powered by General Electric, send in the coupon below.

GENERAL ELECTRIC



Electrical components for all-electric truck refrigeration: (1) alternator, (2) compressor drive motor, (3) voltage regulator, (4) evaporator-fan motor, (5) selenium rectifier.

ACT NOW! Send for FREE bulletin

Section E634-15
General Electric Company
Schenectady 5, New York

Please send me your new bulletin GEA-6084B describing the benefits of all-electric truck refrigeration powered by General Electric.

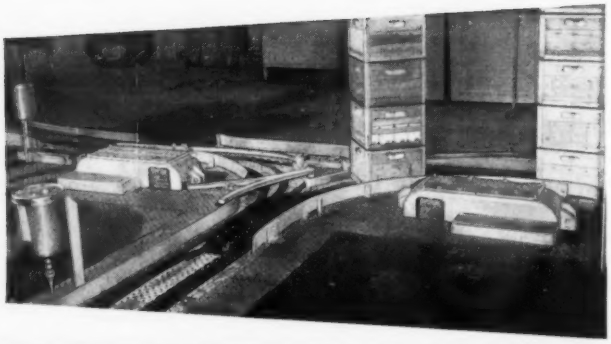
NAME.....

COMPANY.....

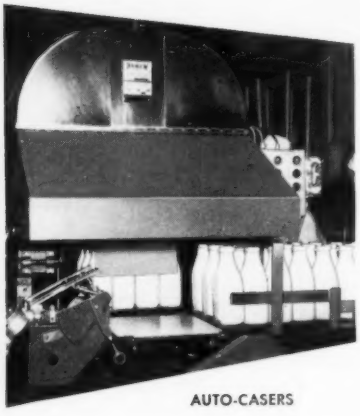
STREET.....

CITY.....ZONE.....STATE.....

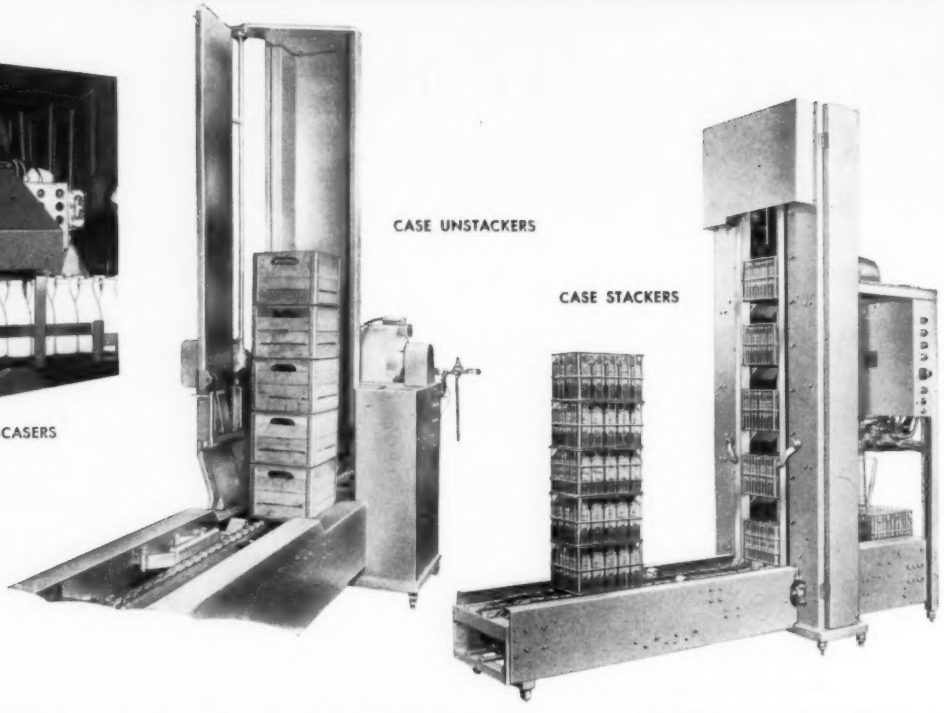
FLOOR-TYPE CONVEYORS



Why limit your volume?



AUTO-CASERS



CASE UNSTACKERS

CASE STACKERS

In your present plant space, and with less work, you can substantially increase your output with a Mojonnier Automation Conveyor System, featuring the efficient Universal Case Stacker, Case Unstacker, Auto-Caser and Floor-Type Conveyor. The Case Stacker, for example, handles up to *48 tons of cases per hour,* stacking them 2 to 6 high as required. The Floor-Type Conveyors are almost fully automatic in operation, carrying full or empty case stacks where needed, easily, smoothly, along straight sections or around curves.

A Mojonnier Automation System can be engineered to *your* production schedules by men who have engineered thousands of highly successful dairy conveyor installations.

For full information, write:
MOJONNIER BROS. CO.
4601 W. OHIO STREET, CHICAGO 44, ILL.

QUALITY
Mojonnier Automation Conveyor Systems
YOU CAN TRUST

CASE STACKERS • CASE UNSTACKERS • BOTTLE CASERS • FLOOR-TYPE AND STANDARD HEIGHT CONVEYORS • CASE LINE COMBINERS • CASE LINE DIVIDERS AND A COMPLETE LINE OF CONVEYOR ACCESSORIES

NEW YORK PHILADELPHIA ALLENTOWN, PA. SYRACUSE WASHINGTON, D.C. RALEIGH, N. C. LAKELAND, FLA. ATLANTA CINCINNATI COLUMBUS, O. DETROIT MINNEAPOLIS ST. LOUIS SPRINGFIELD, ILL. WATERLOO, IA. TYLER, TEX. DALLAS LOS ANGELES OAKLAND

The fresher your milk . . .

the better your business

Keep your milk fresh, and you'll keep winning new customers. The sure way to do it is to cap your bottles with Seal-Hood, the sanitary one-piece closure that assures perfect freshness right down to the last drop in the bottle.

Seal-Hood's positive protection begins in the dairy. Nothing except Seal-Hood touches the pouring lip during the capping operation, or in delivery. In the home, Seal-Hood's full closure guarantees purity until the bottle is empty. And of course, your customers will appreciate the easy-off, easy-on convenience of these modern caps.

With Seal-Hooders in your dairy, *one* operation does all your capping. You eliminate bottle breakage and milk loss, cut time costs, use less floor space. And with the standard Seal-Hood lease goes *free* machine maintenance by trained experts.

Be sure your caps bear the Red Band of Quality that identifies Seal-Hood. Write us for complete details, or ask to have our representative call.

AMERICAN SEAL-KAP CORPORATION, 11-05 44th DRIVE, LONG ISLAND CITY 1, N. Y.

Seal-Hoods **AND** *Seal-Kaps** **PROTECT TO THE LAST DROP IN THE BOTTLE**

*Trade-mark Reg. U. S. Pat. Off.

Industry, Integrity, Confidence, Quality These Are the Elements Out of Which Edward V. Allen Fashioned a Brilliant Career That Has Encompassed—

Fifty Years as a Salesman

By NORMAN MYRICK

Exclusive feature

For 50 years Edward V. Allen has been selling dairy products to retail outlets along the shore country of Connecticut. He has seen the horse and buggy bow before the automobile. He has watched the impersonal efficiency of the supermarket take the place of the old time general store. He has seen quality improve and packaging evolve. He has, in short, seen an era end and another begin. But through all the tumultuous changes that have attended the birth of a new, restless age he has seen the fundamental elements of good salesmanship remain the same. A matter of quality; a quality product and a quality man. Hitch the two together and you've got a team that will sell.

Mr. Allen began selling in 1907, calling on grocers for the L. C. Bates Company of New Haven. The firm carried a line of butter, cheese, eggs, and poultry. The stores were mostly general stores that sold everything from lumber and hay to dry goods and kerosene. "Business was done at a much more leisurely pace in those days," he recalls. "Most of the stores had an office where the storekeeper would take me when it came time to talk business. If lunch time came while we were talking we would go out and eat, then I would come back after lunch and get the order. Today the storekeeper or manager is usually on the floor and that's where you have to talk to him. Activity is going on all around us. Often it is difficult for the storekeeper to give his undivided attention to what I have to say."

A horse and a buggy and the railroad were the means of transportation that Mr. Allen used in the early days. He took a train between towns and rented a horse and buggy from the livery stable for making his calls. In the home territory of New Haven he had a horse that knew the route so well it was practically impossible to follow any but the accustomed pattern of calls. The horse simply would not stand for any deviation from the regular rounds. The animal knew how much time Mr. Allen usually spent at a stop. If he over stayed the usual time the horse would go on without him. "If he was gone," Mr. Allen says, "I'd just walk on to the next store where he would be waiting for me."

See The People

The horse stories are wonderful yarns by themselves but some of them reveal why Mr. Allen has had such a long and successful career. The simple truth is that he worked at it. He tells the story of one horse that belonged to a stable located near the railroad station. "I would make my city calls in the morning," he relates. "When I had those finished I would drive to the alley leading to the stable, loop the reins over the whip socket, jump off the buggy and run for the station. The horse would go on alone to the stable and I would be able to catch a train to another town where I would make my afternoon calls."

A salesman who wants to sell must see the people. That is what Mr. Allen did, he saw the people. Even today, with more than 70 fruitful years behind him, he makes as many as 50 calls a day. Fairmont Foods Company bought out L. C. Bates in 1936. Retirement age is 65 in the Fairmont organization. "But how," says Stanley Paul, manager of Fairmont's New Haven branch," can you retire the man who is turning in the biggest volume on the sales force?" The answer is that you don't. And so, although the cooperative horse at the railroad station has been succeeded by an automobile, Mr. Allen keeps his sales volume high by following the first principle of selling, seeing the people.

Making the call, however, does not make the sale. "You've got to have a quality product that is priced right but equally important you've got to have the confidence of the customer," Mr. Allen maintains. "Actually the two more or less go together. It is pretty difficult to get and keep a customer's confidence if the products you are offering him are inferior goods. After all quality and integrity mean just about the same thing."

The record shows how well Mr. Allen has been able to win the confidence of his customers. In Madison, Connecticut is the store of E. G. Holbrook & Sons where Mr. Allen has called upon three generations of Hol-

brooks. In Guilford, Benton's Inc., is another store where he calls on the grandson of his original customer. A confidence in a man and the goods that he distributes that has endured over half a century is a proud thing, a thrilling thing when you stop to think about it.

Mrs. Allen says that customers often telephone in an order when Mr. Allen is out on the road. "They don't ask about the price or the quality," she says. "They just say 'Whatever Mr. Allen does will be all right.'"

Quality and Confidence

The more I talked with Mr Allen the more I became aware of how closely he equated confidence with quality. He spoke of the old days when butter came in from the country in 60 pound tubs. "We would have to put a trier in every tub," he recalled. "Sometimes the manufacturer would put three or four different churnings in one tub. Inevitably we would find one or two buttermakers or cheesemakers who put out a fine uniform product. They were the ones we tried to do business with. There was a cheesemaker up in Vermont by the name of Gleason who turned out a wonderful cheese. He was the finest cheesemaker I ever encountered. Then there was Mr. Richardson over in New York state who was another good man. It was always a pleasure to get in a shipment of their products; a pleasure to sell them too. They were quality goods and, because they were quality, they had our confidence. In turn we gained the confidence of our customers because we were dealing in quality too."

As a generality Mr. Allen finds that the quality of our dairy products is better today than it used to be. It is due partly to improved manufacturing and processing techniques, partly to the realization of the long term importance of quality in customer confidence and satisfaction. The one exception to this general trend is cheese. "Sometimes I think there are too many kinds of cheese on the market," Mr. Allen observes. "Then, too, the old time cheesemakers like Gleason and Richardson had a skill that is hard to find today. Even so, I have been impressed with the demand for good cheddar. We have people come to the Connecticut shore during the summer who get acquainted with cheese. We have shipped cheese all the way to California as a result."

But, although quality standards become higher generally in the dairy industry, there is a counter trend that disturbs Mr. Allen. That is the nature of the competition that is evolving. "Competition is different today," he says. "We used to compete and compete hard but it was competition on quality and service. I remember how I used to watch for the rig my competitor was driving. If I saw it I would touch up the horse in order to get to the store first. But it was a comfortable kind of competition that wore well and eventually produced the quality that was so important. Today's competition is a brittle, hard type of competition that leads in the opposite direction. For example, we carry a line of frozen foods. We find jobbers coming in with odd lots of goods that they have picked up and are offering at a price. They are one shot things with no continuity, no emphasis on quality although that is not to say that the goods are always inferior goods. But it is an in and out sort of a proposition based on price. It's bad for me, of course, but it is also bad for the customers. I had a case the other day of a customer who was ready to buy some frozen peas out of one of these odd lots. The price was under mine and that appeared to be the main consideration. Well, I talked to the customer like a dutch uncle, which you have to do sometimes. I asked him to compare the uniformity of my peas with the other. I asked him to compare the color and the way they cooked up. Then I pointed out how he had built up a good business on my brand and asked him what his customers would think of the switch. Would they like the other brand? I asked him if he was ready to risk the trade he had established on a brand his customers knew and liked for the sake of a couple of cents a box. He understood what I was talking about and stayed with me but it is a dangerous and discouraging trend."

Perhaps the most disturbing of all the aspects of the new competition is the perversion of the idea of service. "Service is an important part of a sales-

(Please Turn to Page 94)

Recognition of his long service to his company and to the dairy industry was accorded Mr. Allen by the Fairmont organization. Shown here congratulating Mr. Allen (left) are Truman H. Gilbert (center), Sales Manager of Fairmont's New Haven branch and Stanley G. Paul (right), Manager of the New Haven branch.

All-Jersey

Queen of Quality

MILK

A NATION-WIDE MARKETING PROGRAM

offering unusual opportunities to progressive distributors

Presented by The American Jersey Cattle Club
Representing over 70,000 Jersey Producers

FRANCHISES now available

The All-Jersey Program offers these advantages

A local license to distribute a national brand of superior quality milk under a distinctive, advertised trademark.

The support of The American Jersey Cattle Club and the backing of the local Jersey milk producers and the Jersey state organizations.

The assurance of an adequate, constant supply of Jersey milk for a volume market.

Continuing programs of outstanding consumer advertising and promotion available through the national organization. The cost of advertising at the local level may be shared by the distributor and Jersey milk producers.

A strong competitive position for building sales through the distribution of a better tasting milk of greater nutritional value.

A constantly expanding sales opportunity, an assured market through increased consumer demand for a well advertised national brand of milk and milk products...plus the use of a registered trademark and standard label design.

This is a planned program for completing the coast-to-coast, border-to-border introduction of a new, top-quality national brand of milk. It is ready and waiting for forward-looking and merchandising-minded distributors!

WRITE TODAY

Get complete information on the All-Jersey program. There is no obligation. Write on your letterhead to The American Jersey Cattle Club, 1521 East Broad St., Columbus, Ohio. Or, if you prefer, send the coupon at right.

The American Jersey Cattle Club
1521 East Broad Street · Columbus, Ohio

Gentlemen: Please send without obligation, complete information on the All-Jersey Milk Program and its potentials for our company.

NAME_____

Company Name_____

Address_____

City_____ Zone____ State_____

XUM

By DAN WETTLIN, JR.

Resale Price Control

IS IT A NECESSARY COMPANION TO A FEDERAL MARKETING ORDER?

Exclusive feature

It is impossible to give mature consideration to the possibility of using resale price control as a companion to a Federal Milk Marketing Order without a full and conscious understanding of the nature of the fluid milk industry. Fluid milk, an agricultural commodity, is totally dissimilar from any other agricultural commodity. It has 365 crops a year; and, because of its high perishability, each of these crops must move to market immediately, with a daily decision required concerning the ultimate destination of each day's crop. These daily decisions vitally affect not only the processor, but the return which is received by the producer and the supply which is available to the consumer.

The production of milk is a natural and constant process, which cannot be stopped or lessened without running the risk of great economic and health hazards. For once the supply of milk is shut off, it takes a minimum of three years to get it back into production.

An Industry of Small Operations

Possibly because of the nature of the production of milk, the processing and distribution of this commodity, unlike most other agricultural commodities, is for the main part, handled by large numbers of small companies in a highly competitive atmosphere. As a matter of illustration, the two so-called "giants" of the milk industry together, with all of their local operations combined, do not account for 15 percent of the total sales of fluid milk.

And although the total volume of sales of fluid milk are of a magnitude which stamp it as "big business," the overwhelming percentage of this sales volume is made up of huge quantities of individual sales directly from the processor, each individual sale small in size.

And in addition, because of the perishability of the product; the necessity for moving it to market with great speed; the great number of small operators which represent the overwhelming percentage of the industry; and the fact that each of the majority of sales are small ones, the profit margins of the fluid milk industry are also extremely small.

Problems Are Different

Such are some of the characteristics of the fluid milk industry. As compared with most other consumer goods industries, the milk industry's problems are quite different. When the supply of milk overruns the current demand for it, neither the distributor nor the producers can stop production and wait until demand catches up with available supply. This is a normal course of procedure in most industries. In addition, most consumer goods, including agricultural products, can be stored, at least temporarily, and wait "for the market to firm up" or until the inventory pipelines become relatively empty. Such procedures are not available to, and are impossible for, the fluid milk industry. Classified pricing and a diversion of fluid milk to lower priced manufactured uses are the only tools available to the fluid milk industry in the attempt to balance supply with demand.

It is because of these inherent characteristics of the product and industry itself that have caused price control to become the potent tool employed for the stabilization and protection of the industry.

Controls are no stranger to today's business scene. We talk glibly about free enterprise, free labor, and the law of supply and demand as being the magnetic forces controlling the economic prosperity of our democratic capitalistic system. However, these forces, as truisms, do not currently stand up under the full light of analysis.

In industry, the major portion of our labor force is not completely free. It is both controlled and protected by labor unions who specify the hours and times of work and the rates of pay which shall be paid; by social benefits such as unemployment security, disability insurance; government regulations concerning conditions of work, hours of labor, rates of pay; and fringe benefits including medical, retirement, etc.

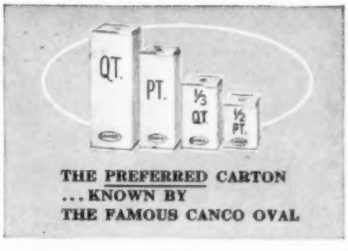
In agriculture, many commodities are in effect controlled both as to price and availability by large and strong cooperatives operating with at least tacit approval of the government. Other agricultural commodities are

BEST CARTON FOR VENDING MILK AND JUICES!

• HAS COMPACT, FLAT-TOP DESIGN • LOADS FASTER, EASIER
• STACKS PERFECTLY • INCREASES MACHINE CAPACITY UP TO 30%

Because of its efficient shape, the Canco carton immediately boosts the capacity of the vendor's machines. He refills them less frequently, makes fewer deliveries, cuts operating costs.

Canco cartons please the vendor's patrons, too; help him attract more regular customers. They find these cartons much easier to open and to drink from.

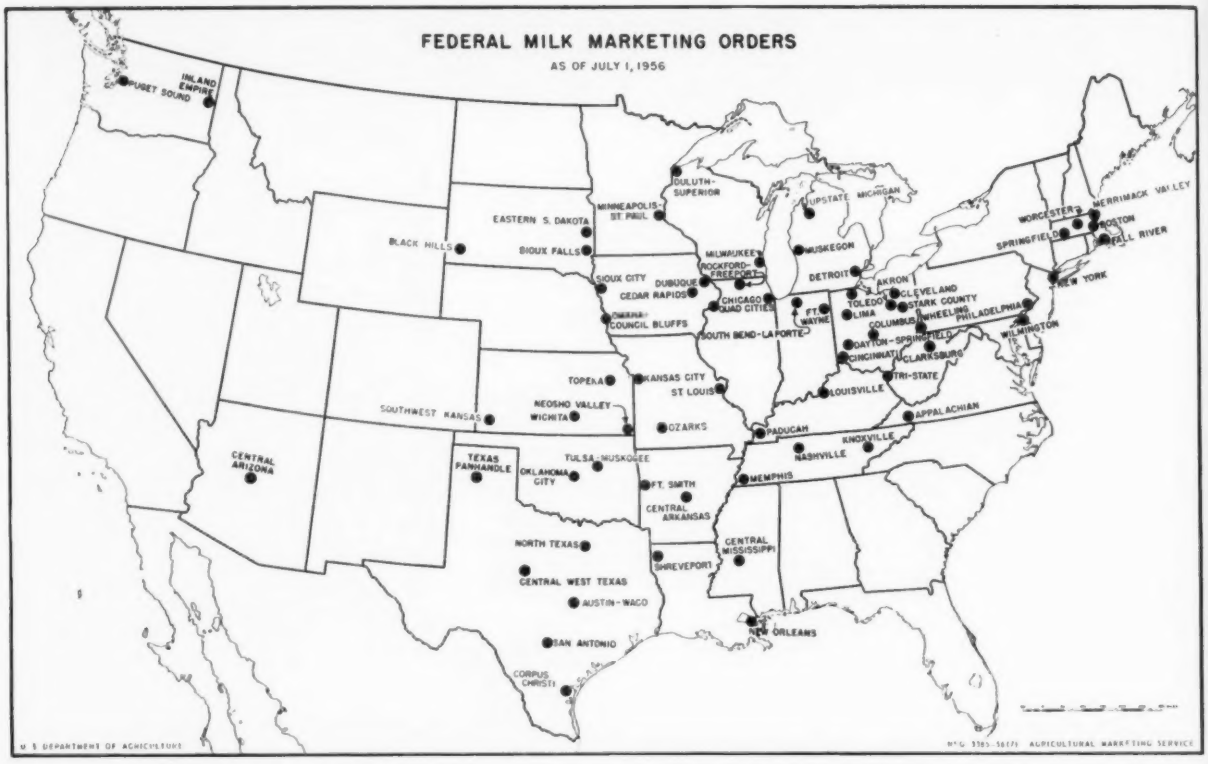


THE PREFERRED CARTON ... KNOWN BY THE FAMOUS CANCO OVAL

As you know, more and more dairy products are being sold through vending machines. To increase your sales in this profitable and growing market—to vendors or through your own machines—give your milk and fruit juices the advantages of the Canco carton!

AMERICAN CAN COMPANY CANCO

NEW YORK • CHICAGO • SAN FRANCISCO



State control of producer prices is ineffective in most cases because it has no application once the state boundaries are crossed. On this map, showing the location of Federal Order markets, notice how many of the cities are located close to state lines. They draw milk from two or more states. Chicago, for example, receives milk from Wisconsin, Illinois, and Indiana. We know of a case where milk from one state was sold in another state to customers in a third state.

similarly controlled both in price and market availability by government price support, buying, and storage programs.

By comparison, the fluid milk industry is markedly different in that it neither has, nor can have, any holding or storing program. It is also markedly different in that with rare exceptions it possesses only relatively small cooperatives which are unable in themselves to establish market patterns or procedures.

Because fluid milk is, of necessity, so very different from other commodities and other industries, the procedures and techniques employed by and available to this industry cannot be fairly compared in their application with other commodities or other industries.

The Case for Resale Price Control

In the eyes of its proponents, resale price control is a measure designed to extend equity to the processors and distributors of a basic food commodity who labor under a myriad of wage, price, and health controls greater than that confronted by any other commodity or industry. It is, in effect, the economic application of the old adage—"What's sauce for the goose is sauce for the gander."

Most of the industry will readily agree that minimum price controls for milk producers are both necessary and here to stay. The rapid growth and spread of Federal Milk Marketing Orders give indication that eventually, the overwhelming portion of milk producers throughout the country will at least eventually be protected in price by these controls.

In essence, a Federal Milk Marketing Order controls the processors and distributors, the sole beneficiaries being the producers.

Many states have attempted to employ state milk control for the benefit of producers, but one by one, each has come to learn that producer price control, practiced from a state level, is ineffective because it has no application once a state boundary is crossed.

In contrast, however, because of the nature of the processing and distribution end of the milk industry, wherein sales are consummated within a specific geographic area, resale price control, in theory, can be made effective. With resale price control, dealers are also controlled, but in addition, they become the beneficiaries of that control.

The theory of milk price control, be it practiced from the State or Federal level, and be it either at the producer or resale level, is that it attempts to maintain fair prices and a stable market for the benefit of producers, processors, distributors, and consumers alike.

Anti-Trust Laws a Main Consideration

The proponents of resale price control point to the rising influence and fear of Federal Anti-Trust Laws as an important reason for employing this measure. The fluid milk industry is experiencing an important transition. More and more, the extremely small distributors, with the advent of new and expensive technological developments and the sharp increase of competition on the street, are finding it either unprofitable or impractical to remain in business. As in

Result: New ways of making your dairy product containers more practical, economical and salable!

Often The Man With the Lily Plan leaves his paper work and production lines to look in at the machines that make machines. By knowing what his custom shop can do, he's able to plan new, sturdier, less expensive containers for you.

One result of such thorough Lily* preplanning is a whole line of special print tub sizes for cottage cheese and other dairy perishables. Large and easy-to-stack, these heavy-waxed tubs are favorites of dairymen. They're economical, retard dehydration, and stand up well even under moist refrigeration. *Available in 2, 3, 4, 5, and 10 lb. sizes with matching special print disc and jute pull lids.*

Also available are special Cottage Cheese stock design tubs in 2 lb. and 5 lb. sizes . . . with disc or jute pull lids.

In today's market, with dairies branching out in so many directions with new products, new packages, new customers, it's good to know that Lily has the men and the machines ready to produce high quality nesting containers to fit dairy needs. In fact, you'd be smart to find out *now* about the great strides Lily has taken in solving your packaging problems. Just write for free details! *Lily-Tulip Cup Corporation, 122 E. 42 St., New York 17, N.Y.*

*T.M. Reg. U.S. Pat. Off.

Lily Cups

other industries, the trend is towards fewer and larger operations.

In spite of the fact that the trend is towards larger processing and distributing operations, the industry is, and will undoubtedly continue to be, characterized as an industry of many small operations. Small is a comparative term, and because of the nature of the commodity itself, the fluid milk business must continue to be essentially a local one. In understanding the locality of the business, it must also be recognized that it is possible for one, two, or three companies in a given market to dominate the sale of fluid milk in that specific market, even though it becomes impractial, if not impossible, for the impact and influence of that company to spread much beyond that specific marketing area.

Because fluid milk is considered by the public as a food necessity; because fluid milk is so thoroughly regulated by government agencies both as to price and sanitary requirements; because the consideration of milk is a highly emotional subject with all mothers, a very complicated economic problem to the industry, and a hot political issue for many zealous politicians, the milk business has been and will continue to be very much in the public eye.

It is foolish to believe that the price for fluid milk charged by one company in a market does not immediately and irrevocably affect the prices charged by all other distributors in that same market.

When a milk distributor becomes large enough to be an important factor within a given marketing area, in the eyes of the public in that area, that distributor is marked as "big business," in spite of the fact that by all standards applied to other industries, he will actually be very small business.

Because of the complications of these impressions, attitudes, controls and political expediency, milk distributors have come to realize that they are prime targets for investigation and prosecution under anti-trust laws.

Strangely enough, the application of investigation and prosecution under anti-trust laws does not always apply equally to all distributors. For instance, an entirely independent distributor of medium size within a given marketing area could conceivably be the instigator of a price war either deliberately or inadvertently. But in so acting, he would have little or no fear of prosecution under anti-trust laws because he is obviously small. At the same time, his competitors within the same marketing area, being part of a multi-state cooperative or having out-of-state corporate affiliations within the milk industry, in attempting to meet the competition would expose themselves to the distinct possibility of anti-trust investigaton. This is a situation which continues to grow in the consideration of the industry.

Because of these factors, the proponents of resale price control point to it as a measure which enables them to compete in the marketing area on terms and conditions other than price itself, in such a manner that they remain relatively immune from investigation and prosecution under anti-trust laws.

Proponents of resale price control also point out that the history of consumer milk prices in markets which employ Federal Milk Marketing Orders without companion resale price control, have a history of fluctuating consumer prices. In these markets, there have been times when competition has compelled some companies to sell at a loss. When this price condition changed, companies were forced to increase consumer prices in order to gain back that which was lost during the price war. Proponents emphasize that the small-and medium-sized milk distributors cannot exist for long in that kind of an operation because of their limited financial resources. They also declare that such fluctuations in consumer pricing are upsetting to the consumer. A study of milk price spreads in markets employing resale price control versus markets without those controls, indicates that the controlled markets have more uniform spreads. Some of the lowest spreads in the nation, and some of the highest spreads in the nation exist in markets operating without resale price control. The study indicates that resale control tends to level out the high and low spots, creating a greater degree of stability.

Proponents insist that resale control offers the consumer the assurance of fair prices, neither too high nor too low—and a protection against price

The development of high-speed, insulated tankers such as this one has enabled metropolitan areas to extend their milksheds farther and farther into the country. Political boundaries have little effect on the movement of milk.

The use of the paper container has been an important factor in the expansion of marketing areas. As the markets have expanded, new competitive situations have developed. One of the results has been renewed interest in resale price controls.

DAIRY TRENDS

Why the market is more competitive this year

You're probably in the middle of a two-way squeeze, if your share of the dairy market is typical.

3,000,000 new consumers are being added to the market each year. That means bigger dairies and more equipment.

The trend toward the five-day work week is continuing in the dairy industry. This too calls for more equipment.

A planned future is one answer

Both factors—larger market, shorter work week—make it more important than ever that you plan your equipment investment with an eye to the future.

For example, suppose you need a 1500-gallon storage tank to meet next year's needs. But three or four years from now you have good reason to believe you'll need twice that capacity.

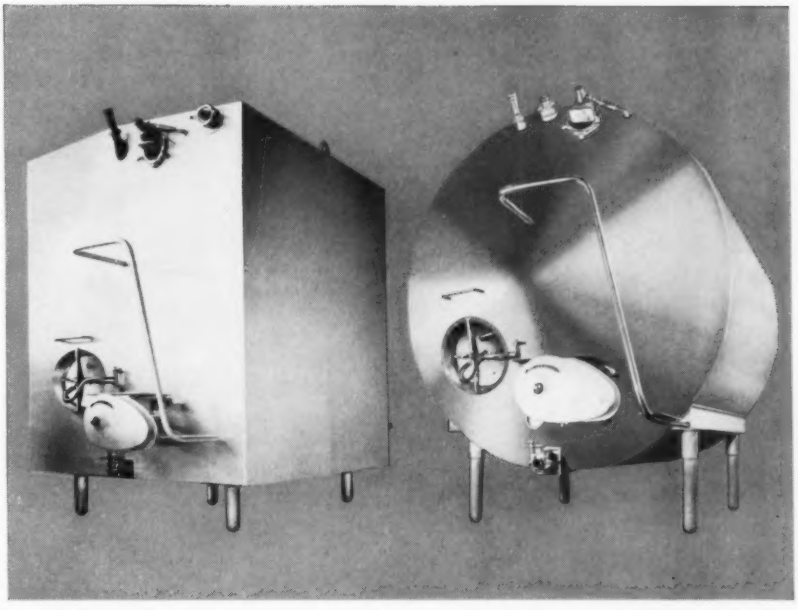
You'd be much better off to buy a 3000-gallon tank at today's prices. You'd also enjoy the larger depreciation allowance of the larger tank.

Finally, you'd get the extra capacity at a much lower price than a completely new additional tank would cost you three years from now.

Value versus price

More efficient, longer-lasting equipment is a second answer to the problems you face in today's market.

On a Pfaudler tank you can get all these features which help process milk faster and at lower cost:



1. Wall cooler — ASME code-approved construction for ammonia, freon or chilled water.

2. Insulation — Cylindricals — 2½" side wall with 2" minimum over wall cooler. Rectangulars — 3" side wall with 2½" minimum over wall cooler. Minimizes heat loss, saves refrigeration.

3. Manhole door — Insulated to minimize heat loss.

4. Outer sheathing — All welded $\frac{3}{16}$" carbon steel plate (stainless steel also available). Adds years of life and enables you to even use tanks *outside the plant.*

5. Rotary seal — The simplest on the market — ONE-PIECE precision-engineered nylon seal slips on agitator shaft in seconds, makes a tight leakproof seal, cleans easily.

These are only five of a dozen or more top features you get when you buy Pfaudler value . . . features which can make your dairy more economical to operate.

For more information on Pfaudler dairy equipment and how it fits into your sales future, contact your dairy jobber, or write us direct. The Pfaudler Co., Rochester 3, N. Y.

PFAUDLER

fluctuations which they state could have a long range effect on the adequate, orderly and regular supply of wholesome fresh milk.

Resale vs Fair Trade

In some areas, both industry and government have attempted the use of Fair Trade Laws for the milk industry, in place of Resale Price Control. The difference between Fair Trade Laws and Resale Price Control is only one of degree. Both strive towards the same objective—more stabilized marketing conditions; elimination of the use of milk as a "loss leader"; and an opportunity for strong healthy competition within the industry on bases other than "below cost" pricing aimed at the elimination of those firms whose financial resources are limited.

Fair Trade Laws take the path of enumerating and specifying a number of actions and policies which are then labeled as "unfair trade practices," and hence declared illegal. They appear to establish "the rules of the game" without clearly and specifically declaring the objective.

Resale Price Control sets forth the objective—clearly and specifically at the outset. Then, in order to accomplish the announced objective, rules and regulations, many quite similar to those contained in Fair Trade Laws, are adopted to fit the circumstances. From time to time, under the administration of resale price control laws, these rules and regulations are changed to meet changing conditions. They are seldom changed under Fair Trade Laws.

Resale Price Control is perhaps more powerful in its effect—more direct in its approach. Fair Trade Laws are usually more obscure in effectiveness and employ a more complicated approach.

However, both are controls affecting price and competitive practices. Although their methods and effectiveness may differ, they are employed by industry and government in an attempt to solve identical problems.

The Case against Resale Price Control

Opponents of resale price control state rather accurately that price control as a theory and as a policy is generally unpopular with the American public. They cite the fact that even under the pressure of war, price control as practiced by OPA and OPS was tolerated by the public only because of the war emergency. The fact that there are basic differences in the conception of price control as administered for milk, and price control as practiced by OPA and OPS is relatively unimportant. To the vast majority of the consuming public in this country, "price control is price control"—and it is foreign to our American way of doing business.

On this very theme, strong segments of our consuming and political

(Please Turn to Page 78)

Ever Run Across Anything Like This?

A "Non-Acid Coagulating Defect in Cottage Cheese Manufacture

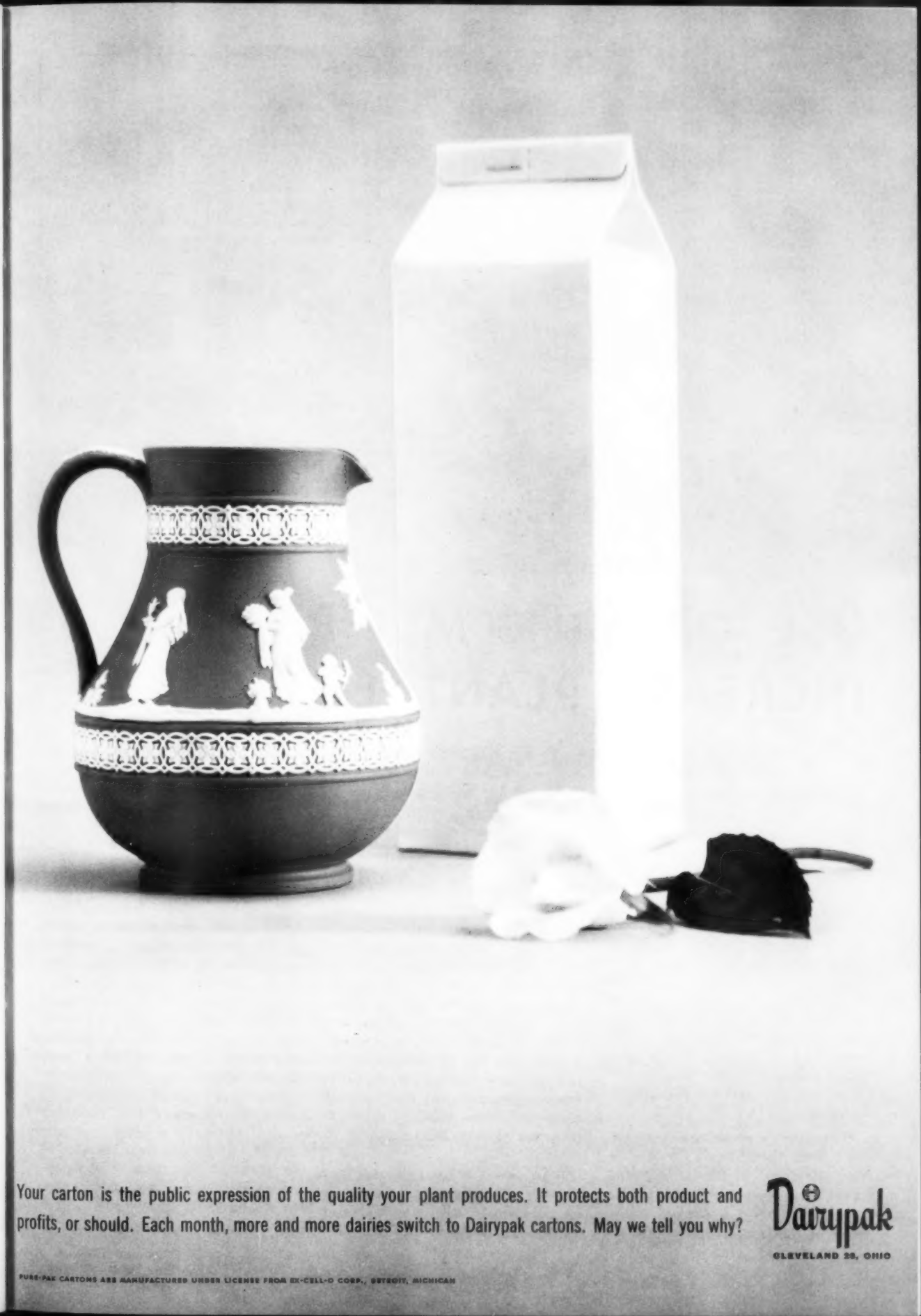
DURING THE PAST THREE YEARS about fifteen scattered reports have come to my attention concerning the problem of "non-acid coagulation" in the manufacture of cottage cheese. This problem, which has been quite sporadic in its occurrence, has been associated with lack of coagulation in cottage cheese even though adequate acid development has been achieved. These reports have come from at least four different communities in the central Ohio area, and in all but one instance, they have been associated with the "long-set" method of manufacture. Acidities of the starter-milk mixture have been as high as 0.94% without any visible signs of coagulation or curdling.

In only three of the cases have samples been obtained that could be studied. The problem does not appear to be associated with the starter cultures. Addition of the starters to mixed herd milk from the Ohio State University Dairy resulted in normal coagulation and normal acid development. Also, the non-coagulated starter-milk mixture, when added to mixed herd milk, behaved like a normal starter culture bringing about normal acidity and coagulation. In a recent case, the addition of a starter carried in this department to the un-inoculated milk causing the problem did not result in coagulation, whereas the same starter coagulated the regular University milk.

Apparently the problem is associated with some change in the protein system of the milk. The addition of as much as 0.02% calcium chloride did not remedy the situation. However, the un-inoculated milk would support normal rennet coagulation. Also, in the most recent instance in which the acidity of the starter-milk mixture was 0.94%, the addition of one ounce of rennet per 1000 pounds of this mixture resulted in coagulation which could be cut in about 30 minutes. The curd could be cooked, and was not exceedingly tough.

Although the problem is sporadic and extremely short-termed. (plants experiencing this problem generally do not have trouble more than one day and recurrence generally not more frequent than several times a year) economic loss has resulted where this problem has occurred. The basic cause of the problem is unknown. Also, the extent to which this problem is occurring is equally unknown. I am aware of only those cases reported to him in the Ohio area. It would be of value to determine the extent to which this type of problem is occurring in the nation. If this is a national problem, rather than a local problem, then certainly further study is imperative to provide a more adequate solution.

Any cottage cheese maker who has encountered the problem described above or who has heard of a case will be doing the industry a service by writing to Dr. W. J. Harper, Department of Dairy Technology, Ohio State University, Columbus, Ohio. Your help will be greatly appreciated. Thanks. Ed.

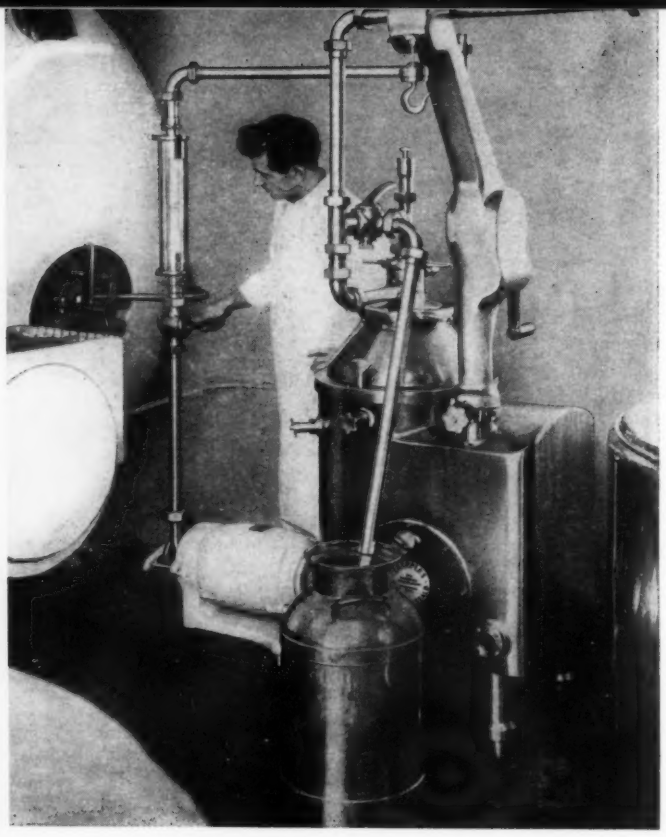


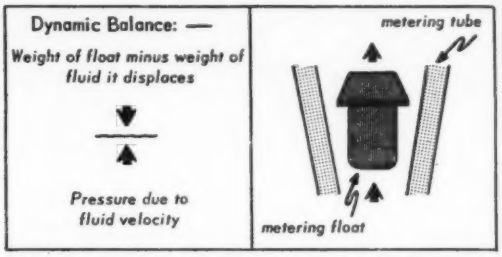
Your carton is the public expression of the quality your plant produces. It protects both product and profits, or should. Each month, more and more dairies switch to Dairypak cartons. May we tell you why?

Dairypak

CLEVELAND 28, OHIO

PURE-PAK CARTONS ARE MANUFACTURED UNDER LICENSE FROM EX-CELL-O CORP., DETROIT, MICHIGAN




Dynamic Balance: —
Weight of float minus weight of fluid it displaces
Pressure due to fluid velocity
metering tube
metering float

These illustrations show the principle by which the device operates.

Typical installation where a multi-purpose mechanism—clarifier, separator, standardizer —is fed by a centrifugal pump regulated by a Flow-Meter. This one is at the Hi-Lo Dairy, Muskegon, Michigan.

USE OF MILK METERS INCREASE PLANT EFFICIENCY

By HERBERT SAAL

Exclusive feature

"Better control over the flow of milk, a more even butterfat content and a more accurately standardized product," is the verdict of Clarence Molewyk and Richard Groeneveld, owners of Hi-Lo Dairy in Muskegon, Michigan, on a new meter indicating rate of milk flow in their plant. The Hi-Lo experience and the appearance of meters in other plants are the fruition of a long search for a metering device that would meet the sanitary requirements of a dairy plant and still maintain its accuracy.

The need for metering devices extends from the farm all the way to the processing plant. The development of pipeline milkers and bulk tanks has stepped up the demand for a meter on the farm. The trend toward fewer plants handling larger and larger volumes of product, plus a ceaseless demand for efficient operation in the face of narrowing margins has stimulated interest in an accurate measuring device in the plants.

There are several meters being tried out on farms but to date no completely satisfactory device has been developed. The big problem is one of air. Milk, unlike water or oil, readily incorporates air, as filler problems have shown. The big engineering hurdle in meter design is to create a device that will distinguish between product and entrapped air. The vacuum pressures and the pulsating nature of the milking operation present a situation that is difficult of solution.

Plant meters in use today fall into two general categories. One type measures rate of flow. A second type measures quantity of -product. We have seen both types of meters in operation but will confine our discussion in this article to the flow type which is the kind in use at Hi-Lo Dairy.

There is a definite value to plant managers in knowing the rate of flow. The effective performance of a short time system, for example, is dependent on the rate at which milk flows into it. On long runs variation in rate of flow can mean loss of production. A continuous and accurate indication of rate of flow can serve as a check on the amount of product that a pump is delivering, it can prevent burn-on in a tubular heater, it can provide for more efficient operation of separators and clarifiers. In a sense the finely machined sanitary pumps have served as meters in the past. But pumps suffer, as meters, from the fundamental problem in meter design of

(Please Turn to Page 94)

At refrigeration temperatures...

SUNOCO TIGHT SEAL WAX GIVES CARTONS GREATER STRENGTH

Sunoco® Tight Seal is a 100% petroleum wax. It is especially processed to give your cartons increased strength and flexibility at temperatures between 40F and 50F. In this temperature range, ordinary waxes become brittle, frequently crack and flake. The consistent high quality of Sunoco Tight Seal will assure you of strong cartons, fewer bulgers and leakers.

Tight Seal is available in 50-lb. cartons, 1,000-lb. and 2,000-lb. pallets, tank cars, and tank trucks. It is sold exclusively through Pure-Pak. Call or write Pure-Pak Division, Ex-Cell-O Corp., 1200 Oakman Blvd., Detroit 32, Mich.

SUNOCO®

INDUSTRIAL PRODUCTS DEPARTMENT

SUN OIL COMPANY Philadelphia 3, Pa.

©SUN OIL COMPANY

IN CANADA: SUN OIL COMPANY LIMITED, TORONTO AND MONTREAL

Photograhps by Toledo Blade

Arnold Page manipulates the controls on the monitor panel of the closed circuit television installation at The Page Dairy Company. Pictures on the three screens, showing activity in the milk storage room, are piped to the panel from three cameras.

Foreman Joe Frankhauser (left) listens pretty intently as Floyd Harper of Harper Electronics explains the operation of a T-V camera. Function of the cameras is to enable supervisors to develop better coordination between processing room and milk handling room.

Closed Circuit Television Installed in Toledo Plant Provides Better Supervisory Control

Exclusive feature

Three television cameras in the milk storage room that send pictures of the handling operation to monitor screens in the office of the Superintendent and Foreman of the Fluid Milk Division have been installed in the plant of the Page Dairy Company, Toledo, Ohio. Designed to save steps and time the closed circuit systems enables supervisors to be in contact with the milk storage room by voice and vision without leaving their office.

The television system at the Page Dairy Company is, to our knowledge, the first use in the dairy industry of a method of communication that has found application in other industries. The basic idea is to bring operations, ordinarily difficult to supervise because of location or inaccessibility, under easy observation. Such varied enterprises as power companies, hospitals, aircraft manufacturers, department stores, and toll roads are using television as an instrument in the supervisory function. Still very much in its infancy as far as effective use is concerned, the system has, nevertheless, an impressive quota of success stories. For example, the Pioneer Bank and Trust Company in Shreveport, Louisana used television to speed up its service to customers and eliminate duplication of records between the main bank and two branches. Officials of the bank, while unable to estimate the time saved said," . . . it brings everything together much clearer, better and faster than was possible before."

Three Cameras Used

The system used at Page Dairy Company consists of three cameras, one of which is fixed in position and two which can be rotated 360 degrees. The cameras are installed in the milk storage room. A monitoring panel with a screen for each camera is located in the office of Bernard Vozobule, Superintendent of the fluid Milk Division, and Foreman Joe Franckhauser. The two movable cameras can be manipulated by means of push buttons on the control panel. A two way communication system incorporated in the panel enable the supervisors to carry on a conversation with workmen in the storage area. In addition, loading doors leading from the milk storage room to the loading dock can only be opened and closed by controls on the panel board.

The television cameras, in effect, enable supervisors to accomplish the age old impossibility of being in two places at the same time. Mr. Vozobule's office looks out on the fluid milk processing and filling room. From his office, therefore, he can observe the processing operation by looking out of the window and the milk storage and loading operation by looking at the pictures on the television screens.

Because the television system is designed to cope with the more or less intangible function of supervision is difficult for an observer, not connected with the immediate supervisory problems, to fully understand the contribution that the equipment makes. The value of voice communica-

(Please Turn to Page 89)

XUM

half pints for "Half Pints"

When the school bells ring, half pint bottles begin to move . . . and move fast. Be sure you have enough crates on hand to take care of the increase in half pint sales. AND NOT ONLY ENOUGH CRATES, BUT THE RIGHT CRATES. Milk Bottle Crate Company has built up its inventory of 20, 24 and 30 bottle half pint crates so that your order can be filled promptly. An order now will save you headaches in September.

and when ordering crates, keep these facts in mind:

STODDARD ***crates offer . . .***

A. Select hardwood with furniture corners for added strength and smooth hand holes for safe, easy handling.

B. More positive stacking with full stacking irons that reinforce corners and reduce crate wear.

C. Rigid welded wire pockets that protect bottles and strengthen the crates . . . reducing bottle loss and crate replacement.

MILK BOTTLE CRATE COMPANY

DIVISION OF STODDARD MANUFACTURING COMPANY

1545 Kingsbury Street • Chicago 22, Illinois

MOhawk 4-1650

Man Who Points Gun Must Expect to Be Shot at *—Confuse us.*

PRICE WARS ARE FOLLY!

By RAYMOND J. WATSON

"Once you offer a price cut whether it be a straight out-and-out cut, an advertising allowance, rebate, or just plain giveaway, you're skating on thin ice."

Price wars can lay claim to the dubious distnction of being the silliest situation in which an industry can find itself; however, in many industries price wars seem as inevitable as death and taxes.

The dairy industry has more than its share of such foolish wars. Oftentimes, it is a two-front war, namely: offering ridiculous premiums for raw milk and cutting the selling price of bottled milk to a figure which prohibits any possibility of a break-even, much less a profitable operation.

Perhaps what makes such a situation even more ridiculous is the fact that anyone who provokes a price war certainly must realize that the provocative issue will eventually be settled; and most probably it could be settled quicker and better without the war. Of course, it might be pointed out that so are real shooting wars eventually settled, so why have them at all? And I hasten to add: That's a worthy observation, "Why have them at all?" But let us look at some of the reasons – the causes and effects of price wars in the milk industry.

One could list a multitude of *Causes* (or would *Excuses* be the better word?), but basically methinks just about all of them could be pin-pointed to the fact that someone wanted more business, regardless of the ethics involved in getting it. Now, in itself, the desire for more business is certainly normal and good. I dare say, in fact, there are few plant operators who would not hesitate to relieve the payroll of anyone who did not display such a desire or work toward the end of increasing the dairy's business. Unfortunately, though, all too often some over-zealous salesman will step a little over the line in trying to increase sales, and that little step often ignites the flame which turns into a burning conflagration.

Brand vs. Brand

Milk is a commodity which virtually every home in the country uses. And, even though organizations such as the American Dairy Association are striving to increase milk consumption, their successes lie in persuading individuals to drink *more* milk than they are now drinking because, as aforesaid, practically everyone already drinks some milk. Accordingly, the dairy industry is one which is in a position of not so much having to sell to people the idea of drinking milk but rather it is the problem of each individual company to sell the idea of drinking their particular brand of milk. Owing to this condition, in order for Dairy A, for example, to increase milk sales, it must get some business from Dairy B. It's simple logic to deduce that if Dairy A, then, is to induce Mrs. John Doe that she should change from Dairy B's milk to Dairy A's milk, some worthwhile offer must be pointed out to her.

So, one might say that the industry sits on a perpetual powder keg, ready to explode anytime someone gets a little too aggressive. In large cities, especially, the quality and sanitation arguments are not very formidable because in this day and age our health code in most areas is such that the milk product itself must conform to rigid standards which result in its being acceptable to consumers under the label Grade A. So, whether it be the solicitation of wholesale or retail business, the dairy representative trying to sell his company's product must, it seems, offer something other than his personality to the grocer or housewife if he is going to be successful in placing his brand in the store or home.

I am sure that every seasoned salesman soliciting grocers for a space in the dairy case has heard one or more of several stock answers: "I'm already handling three or four brands," "I don't have any more room in the dairy case," or, "What can you offer me that I'm not already getting?"

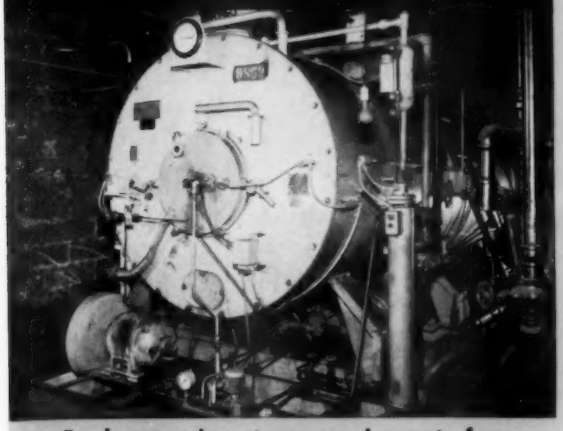
Obviously, it's the last retort which often touches off the ill-fated spark. Because once you offer a price-cut, whether it be a straight out-and-out cut, an advertising allowance, rebate, or just plain give-away, you're skating on thin ice. Competition will readily learn of your offer (perhaps before you've had time to deliver the first order) and will either meet or top your proposition, depending on how much business is at stake.

This repeated tragedy in the milk industry had reached such magnitude that some states felt forced to enact laws to keep the situation in hand,

STEAM GENERATING PROBLEMS SOLVED

. . . a report

by AMESTEAM GENERATOR

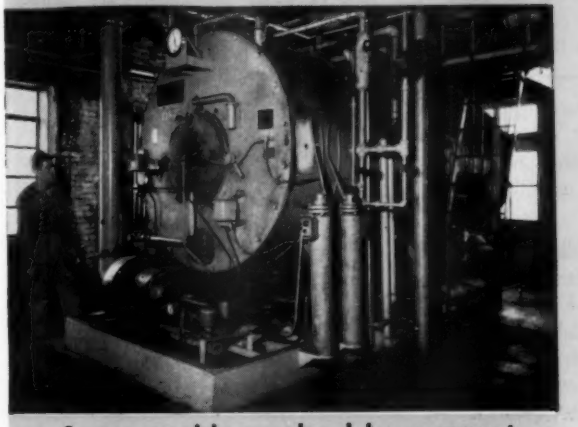


Food processing steam requirements from lowest demand days to full capacity easily handled by this AMESTEAM GENERATOR.

". . . most economical and trouble-free unit we have owned in our thirty years", writes J. J. Giammalvo about his AMESTEAM GENERATOR.

"...the boiler operates with a minimum of maintenance beyond opening and cleaning for annual inspection. It easily handles our steam requirements from the lowest demand days to full rating when our dryers and condensers are being used to capacity, operating faithfully, week after week, burning No. 6 fuel oil.

"This boiler, installed on January 5, 1951, has been by far the most economical and trouble-free unit we have owned in the thirty years we have been engaged in the manufacture of cheese and other dairy products . . ."

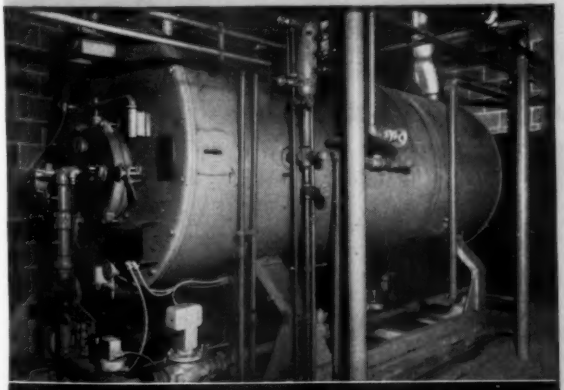


Space problem solved by compact AMESTEAM GENERATORS dependably serving large Pure Food Factory.

Food plant appreciates space savings, performance and service.

"Up to the time we purchased your AMESTEAM GENERATORS, we were users of coal", writes Erwin C. Meyer of "HANSA" Pure Food Factory, Mamaroneck, N.Y. "We needed new boilers, so the writer studied different makes of steam generators and finally decided on your generator because it was so compact and complete.

". . . the new AMESTEAM GENERATORS are in their new boiler house and we are well pleased with their performance. We require very little service from you. The service you rendered was prompt and very cordial. It was a pleasure and it is a pleasure to do business with your firm."



Space-saving, efficient AMESTEAM GENERATOR delivering dependable steam for Gates Rubber Company.

At Gates Rubber Company—"very reliable and entirely satisfactory".

Robert L. Hall of Gates Rubber Company Sales Division, Inc., reports on the AMESTEAM GENERATOR in the firm's Sioux Falls, Iowa plant:

"We have found this equipment to be very reliable and entirely satisfactory in our application. The boiler has carried the maximum load that we have required of it and we have absolutely no mechanical or electrical difficulties since its installation" (May, 1956).

". . . we had occasion recently to inspect the boiler internally, and it was found to be in excellent condition in every respect".

WHAT'S YOUR STEAM PROBLEM?

If you need 10 to 600 HP and want the kind of space-saving, trouble-free service enjoyed by these owners of AMESTEAM GENERATORS, write today for our catalog and the name of your nearby AMESTEAM dealer.

AMES IRON WORKS INC.

BOX Z-77 OSWEGO, N.Y.

and price controls followed. Frankly, though, it's unfortunate for any industry when circumstances reach a point resulting in further controls. With every control comes a lessening of free-enterprise, and it would be a sad day indeed if the industry ultimately became saddled from coast to coast with controls on the selling end as it is on the buying end. But is the industry headed in such a direction?

Limitations of Price Control

Scarcely a week goes by but that some newspaper or another doesn't bear a front-page news item of a milk war. Some states which do not now have price controls are in the legislative process of enacting such laws. Such bills are currently being discussed in Minnesota, Missouri, and Iowa – just to name a few. Of course, if such laws are passed, they must be enforced. Enforcement is expensive. It requires a great deal of police work to do the job adequately. And just whom does one suppose will pick up the tab for this work? In most cases, the dairies are assessed according to their volume to create a fund to support the program, but ultimately of course it's the consumer who'll pay and the long-range effect certainly won't endear the dairy industry to the hearts of their customers.

This writer cannot believe that the consuming public would ever, if left to majority vote, endorse a controlled selling price; because it is obvious that such a control is to set a minimum rather than maximum price on a bottle of milk. And when the Commission, hired to determine what the price shall be, looks into the matter of costs, the members will necessarily have to know the Dairy's operational cost for processing plus distribution cost in order to decide what price would yield a fair margin of profit.

Naturally, in determining the operational cost, the amount of money the dairy has been assessed to support the functions of the Commission will be reflected in the over-all costs and therefore increase the minimum price at which the milk shall be sold. Adding more costs to dairy products is certainly not a step in the right direction of trying to increase sales unless those costs are for the purpose of giving the consumer more for his or her money.

Has the dairy industry reached a point where it must, in effect, ask to be subsidized by consumers? Must it perform police work to keep competitive practices ethical? Could further control have any possible merit when weighed against the catastrophic results it could have?

ABOUT THE AUTHOR

Raymond J. Watson is a working milk sales manager. What he has to say about folly of price wars is the product of many years experience in the milk business. This is the most recent of many contributions from Mr. Watson's fertile mind.

The price of raw milk is already set by the Federal Market Administrator; the cost of labor in a given area is set by the prevailing labor union; the only thing, then, which the individual dairy has left to its own determination and thinking is fixing the selling price of its products. Take this "*Privilege*" away, and it becomes a sham and mockery to call it free enterprise.

I am fully cognizant of the fact that many dairy plants have themselves sought such legislation in their respective areas; and others are seeking it. I am aware that labor unions in many instances support the enactment of such controls (and I feel their reasons are quite apparent); yet, I cannot but feel convinced that the majority of consumers would not favor it, and it would be a crippling blow to the very heart of the very thing which has made this country great and the dairy industry grow. To me, it is tantamount to saying: "We can't settle our own problems; we really can't run our own business sensibly; come, please, stop us before we destroy one another!"

Market Development

Any fool can *start* a price war. It takes just plain common sense to avert one. There is a greater need than ever before for the dairy industry to pool its know-how and resources toward promoting greater consumption of dairy products. By uniting efforts to increase the demand for milk and milk products in various ways, the industry will thrive. Instead of throwing money down the drain by unethical practices of "throat-cutting," such money spent on promotional and educational campaigns on the importance of drinking *more* milk, cooking with milk, using butter, eating more cottage cheese, improving quality, etc., would reap better harvests.

How futile it is to try to fool one another! The industry is populated with too many experienced heads in the game not to recognize unorthodox gimmicks under divers disguises. And to try and squeeze the other guy out of a store by *SELLING BELOW*

(Please Turn to Page 88)

RIDAK SUPREME QUALITY SANITARY PAPER GASKETS AND LAFLEX FIBER GASKETS

RIDAK GASKETS . . .

- Made by gasket craftsmen.
- Accurately fabricated.
- Top grade pure manila paper.
- Standard .035" thicknesses.

LAFLEX GASKETS . . .

- Same sizes as Ridak gaskets. (Use Ridak numbers — specify Laflex).
- Recommended for trouble spots where stronger gasket is needed.

Special sizes and shapes supplied on order — 48 hour delivery.
Standard sizes usually 24 hours.

Reference Table for Ordering New RIDAK Pump Gaskets

GASKET NO.	GASKET SIZE O. D. x I. D.	EQUIPMENT USED ON WAUKESHA
10BB	7⅛x4⅛ — 5⅞x3⅛	No. 10BB Pump
25BB	9⅛x6⅛ — 7¾x4⅛	No. 25BB Pump
25A	8 x5½ — 6¼x3¾	No. 25 Std. Pump
55BB	14½x9½ — 12⅝x7⅝	No. 55, 100 and 125BB Pump
125A	11⅞x8⅛ — 9⅞x6⅛	55, 100 and 125 Std. Pump
466A	6¼x4⅛ — 5⅛x3	No. 10 Std. Pump

Reference Table for Ordering Gaskets for Sanitary Fittings

GASKET DESCRIPTION	Fitting Size and Gasket Numbers 1"	1½"	2"	2½"	3"	4"
Flat Seat Fitting Narrow Flange	75	1505	2005	2505	3002	4005
Bevel Joint Fitting Standard Flange	1001	1501	2001	2501	3001A	4002
Bevel Joint Fitting Wide Flange	4	1502	2002	2502	3001	4003

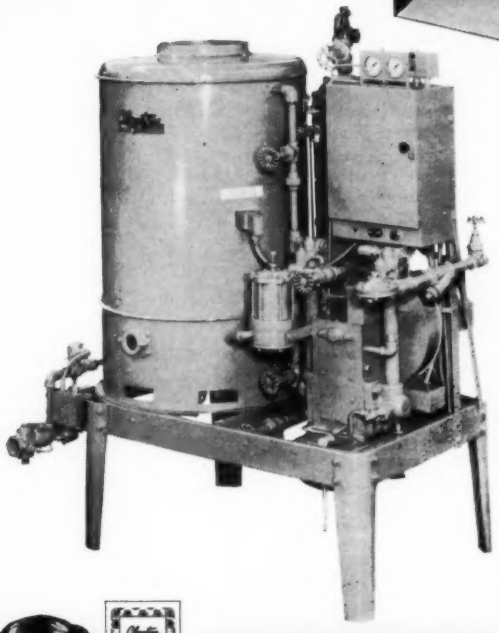
BOONVILLE MANUFACTURING CORPORATION Boonville, New York

CRAMPED FOR SPACE?

RELEASE PRESENT SPACE FOR ADDED PRODUCTION WITH

Clayton STEAM GENERATORS

INCREASE HORSEPOWER UP TO 4 TIMES THE H.P.— IN THE SAME SPACE!



CUT COSTS — BOOST PROFITS!

Why waste valuable production space on big boiler room installations? Clayton Steam Generators take up only ¼ the space of ordinary boilers of equivalent horsepower. Place 'em at or near the spot where steam is *used—avoid* long, heat-wasting and costly piping and conduit—*avoid cost of* maintaining conduit, special floor construction, tall smoke stacks—*avoid* smoke abatement problems! *Save up to 50%* on fuel—save even more on production shutdowns; when you use two or more Claytons, one serves as a standby steam source for the other!

CAN BE LOCATED AND MOVED AS DESIRED— INSTALL ON ROOF—ON ANY FLOOR— IN BASEMENT—Clayton Steam Generators are so light and compact, you can put 'em in closets, in corners, in "waste" space! From roof to basement, wherever you have as much as 15 to 28 square feet of floor, you can install a Clayton unit, 15 to100 H.P. according to need. No costly new construction, no ripping out walls, no shoring up floors! Your new Clayton Steam Generator can be on the job, making profitable production for you in days instead of weeks!

Exclusive! ONLY CLAYTON GIVES THIS 5-YEAR PUBLISHED WARRANTY

Of every 100 Clayton generators produced (in the last 26 years), 97 are still serving users profitably and efficiently. Compare Clayton's 5-year published warranty on material and labor.

For Full Information—MAIL COUPON NOW!

CLAYTON MANUFACTURING CO., Box 550, El Monte, Calif.

Gentlemen: Please send complete information on how Clayton Steam Generators can increase our profits.

Name_____

Company_____

Address_____

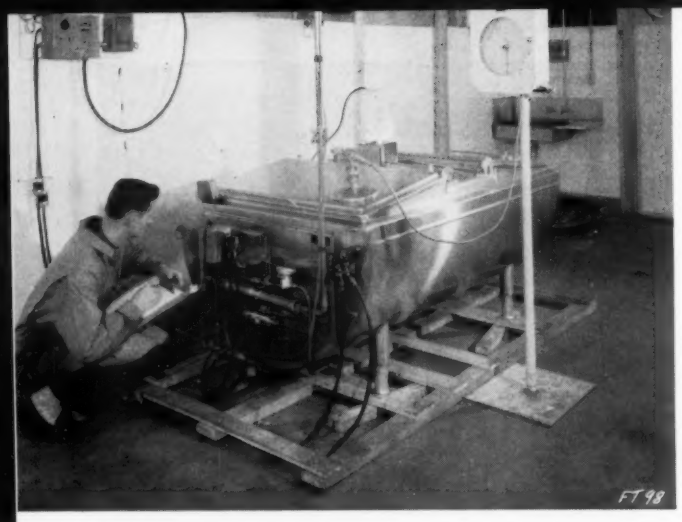
City_____ Zone____ State_____

We use steam for_____

_____

Clayton MANUFACTURING COMPANY
El Monte, California • Cincinnati, Ohio

A-7



Illustrative of the thought and study going into bulk handling is the work being done at the Tomahawk, Wisconsin plant of the Solar Permanent Company. Here, milk house conditions, including seasonal variations are reproduced and their effects on the tank recorded by sensitive instruments. On all fronts investigations of the bulk method are going forward. A new survey by Republic Steel Corporation and a National Conference at Michigan illustrate the growing impact of bulk handling on the Dairy Industry.

Bulk Tanks Reach 60,000 Mark

By HERBERT SAAL

TWO RECENT EVENTS have demonstrated the bulk tank's tremendous impact on the dairy industry. One is the publication of a report of two surveys of trends in bulk milk tank use by Republic Steel Corporation. The other was the first National Conference on Bulk Milk Handling at Michigan State University in May.

The Republic study revealed that since 1950 the total number of tanks has roughly doubled each year. Fifty-nine thousand six hundred and forty-five tanks were reported in 42 states on January 1, 1957, with an estimated 60,139 tanks in use nationally. This is an increase of 106% over the 28,831 tanks in use January 1, 1956, in those 42 states. It is expected that the rate of increase in installations will slow down in most states between 1960 and 1965. An estimate for 33 states places the number of tanks in use, when demand slows down, at 168,252 bulk tanks in these states.

The report says that about 85% of the bulk tank routes are on every other day pick-up. Most of the others are committed to daily pick-up by sanitary regulations. Hence, most bulk tank requirements will be for two and one-half times the peak daily production plus allowance for expansion.

The following were the specific complaints and suggestions uncovered by the Republic survey: (The number of states and areas reporting specific problems is given with each item).

High initial cost was a frequent complaint–25.

Calibration problems–difficult reading–inaccurate–get out of adjustment–three suggest different methods of measuring like metering–11.

Inadequate agitation system – too slow–too fast–make cleaning difficult–too slow at pick-up time–leaky motor connections or seals–poor agitation for small quantities–place nearer bottom of tank–12.

Tanks not rigid–sometimes related to design and sometimes to installation–affects calibration–tanks bulged –better tank bracing needed–suggest curved rather than flat surfaces–8.

Tanks too high for cleaning and filling–mostly in reference to large tanks–remember the short man–7.

Tight fitting covers to protect against dust and insects. Complaint most frequent in the south–8.

Better instructions for installation and operation–4.

Improperly installed–better instructions on foundations–5.

Cooling system failures–not balanced to size of tank–freeze milk–under powered – better functioning controls needed–trouble with outside compressors in winter–test all sizes and models for performance–12.

Maintenance–chipping of outside coating–rusting of standpipe in ice-bank tanks–5.

Outlet valves poorly designed–difficult to clean–4.

Vacuum tanks–need research–difficult to clean–3.

Tanks drain too slowly–not enough slope to bottom–3.

Better controls–responsive only to milk temperatures – thermometer not reliable or accurate–4.

Better motor protection–3.

In the comments concluding the report, Republic Steel says, "Bulk tank manufacturers, dairy cooperatives and milk dealers should take increasing responsibility for educating dairy farmers on bulk tank programs and in working out for and with farmers advantageous group methods of purchasing and financing–thus becoming a partner with the farmer in making a difficult adjustment. In addition to opening up sales opportunities, this service has significant public relations values."

The National Conference on Bulk Milk Handling was an historic event, of itself. It was the first national meeting ever held on the specific subject of bulk tanks.

(Please Turn to Page 48)

HERE'S WHAT DE LAVAL MEANS BY SERVICE!

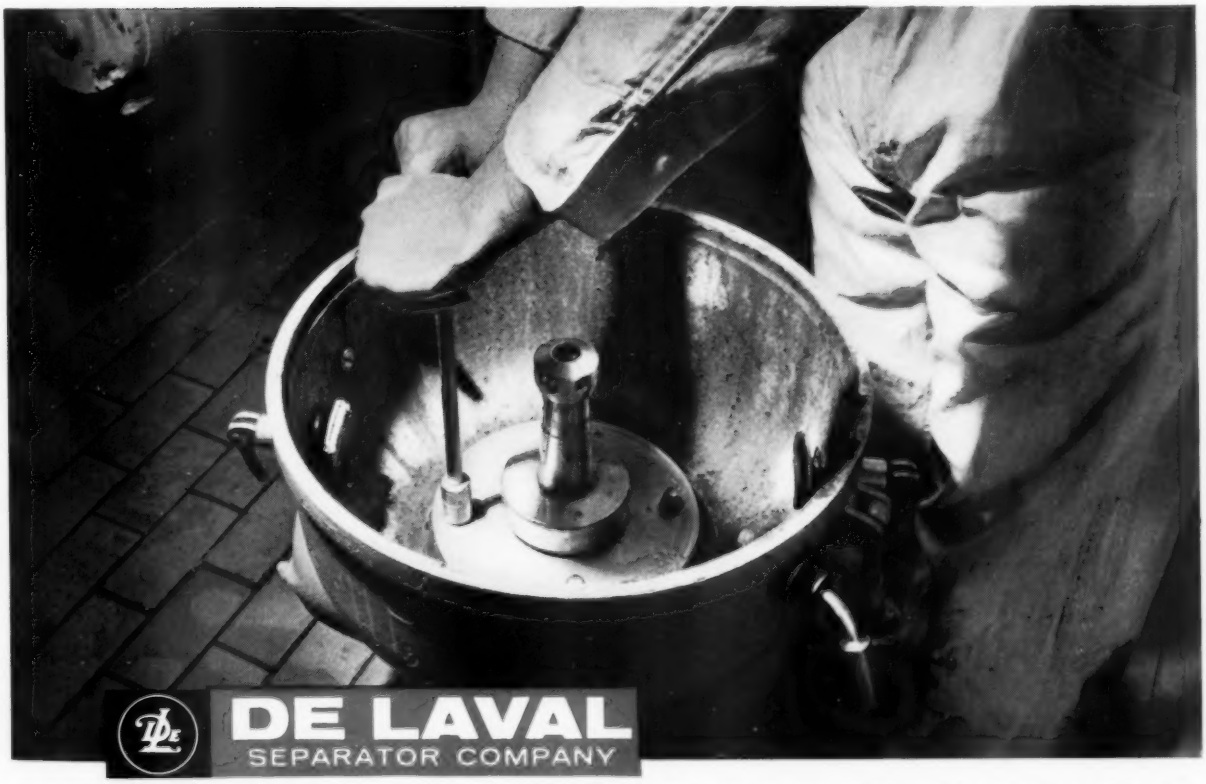
We design and build milk plant equipment for maximum efficiency and dependability. We set up our De Laval Service Organization on the same basis. Its function is to save you time . . . maintain your production . . . keep your operating costs down. Today, De Laval Service offers . . .

A NATION-WIDE NETWORK OF FACTORY-TRAINED DE LAVAL DEALERS—each with an ample stock of parts—able to service your De Laval equipment . . . immediately!

THREE STRATEGICALLY LOCATED DE LAVAL SHOPS—Poughkeepsie, Chicago, Millbrae—all with complete facilities to provide factory service.

DE LAVAL MILK PLANT REPRESENTATIVES—outstanding experts in milk plant equipment . . . backed by De Laval's vast knowledge of milk plant operations . . . always available to help in the solution of operating problems!

When you want Service, get the best Service—De Laval!



DE LAVAL SEPARATOR COMPANY

THE DE LAVAL SEPARATOR COMPANY Poughkeepsie, New York • 427 Randolph St., Chicago 6 • DE LAVAL PACIFIC CO. 201 E. Millbrae Ave., Millbrae, Calif.

Bulk Tank Count by Markets

Statistics From A Survey Made

Market	NUMBER BULK PRODUCERS JAN. 1			
	1956	1957	1958 (Est.)	Total Producers Jan. 1, 1957
Boston	561	1,009	1,500	11,716
Merrimack Valley	78	95	180	1,090
Springfield	238	349	430	1,195
Worcester	154	211	240	680
Fall River, Mass.	81	98	101	233
New York	275	438		45,891
Philadelphia, Pa.	223	223	400	7,440
Greater Wheeling, W. Va.	28	69	90	1,358
Tri-State: Huntington, W. Va. Gallipolis, Ohio; Athens, Ohio		46	100	2,098
Appalacian, Tenn.; Bristol, Va.	51	122	200	669
Bluefield	54	56	100	324
Detroit	94	696	2,000	11,536
Toledo, Ohio	25	165	287	11,716
Lima, Ohio	100	128		827
Dayton-Springfield, Ohio	256	590	1,000	2,328
Columbus, Ohio	4	63		1,936
Akron-Stark County, Ohio	88	178	270	3,208
Cleveland	34	177	325	7,258
Cincinnati	180	395	600	4,100
Milwaukee	765	1,563	1,910	2,345
Chicago, Illinois	3,769	7,000	10,500	21,150
South Bend-Laporte, Ind.	133	350	500	1,026
Duluth-Superior		166	350	1,459
Minneapolis-St. Paul	400	2,486	3,200	3,827
Dubuque, Ia.	11	44	70	256
Cedar Rapids-Iowa City	566	813	850	926
Quad Cities	126	213	405	1,080
Omaha-Lincoln Co. Bluffs		571	1,400	2,159
Sioux Falls-Mitchell	227	274		326
Black Hills, South Dakota	62	96	120	151
Eastern South Dakota	50	92	110	134
Kansas City	6	11		2,751
Wichita, Kansas	258	560		875
Southwest Kansas Area		39	85	321
Louisville	456	1,747	1,970	2,092
Knoxville, Tenn.	14	53	92	1,019
Nashville, Tenn.	113	244	400	1,610
Memphis, Tenn.		157		1,202
Chattanooga, Tenn.		60	120	801
Central Mississippi	16	26		981
Central Arkansas		147	260	940
Tulsa-Muskogee, Oklahoma	17	105	225	1,258
Fort Smith, Arkansas			35	274
Neosho Valley	9	47	135	760
Oklahoma City, Oklahoma	110	267	375	1,346
New Orleans, La.	1	2		2,439
Shreveport, La.	5	55	200	489
Central West Texas	18	79	130	700
North Texas	307	736	1,050	3,230
Austin-Waco, Texas	38	112		488
San Antonio	25	34		513
Corpus Christi, Texas	75	72		340
Central Arizona		421	445	458
Puget Sound	2,649	2,773	2,860	3,687
Inland Empire		1	60	954
Grand Total	12,755	26,524	35,680	171,314
Percent of Total				

Shows Chicago Far Out in Front

By The Republic Steel Corporation

BULK TANK SIZE IN GALLONS							HOW TANKS ARE SOLD		
100 or Less	150	200	300	400	500 or More	Total Tanks	Direct To Farmers By Manufacturers	Through Co-Ops or Processors	Through Local Dealers
22	109	202	319	199	158	1,009		101	908
1	12	28	24	21	9	95			95
14	40	74	136	55	30	349			349
18	47	64	54	21	7	211		38	173
1	1	11	54	16	17	100	1		99
		18	17	5	6	46	6	18	22
2	8	18	47	29	18	122	6	104	12
3	14	13	9	5	12	56		6	50
5	44	71	278	90	34	522			
1	15	23	51	41	34	165	17		148
	19	19	72	12	6	128	64		64
	62	137	86	42	22	349			
		1	9	20	15	45	61	2	
		15	93	50	20	178		61	117
	4	32	12	37	47	132	9	9	159
5	105	180	60	10	35	395	20	336	39
120	460	460	425	55	43	1,563	78		1,485
									350
2	8	39	90	24	3	166	30	71	65
45	45	300	900	366	122	1,778	174	1,989	323
							2	5	37
10	70	270	303	150	10	813		366	447
	4	11	140	46	12	213			213
									571
1	10	125	120	10	8	274		123	151
	3	19	55	15	5	97		36	61
	4	37	34	8	9	92			92
								3	8
							3	36	219
	1	2	17	8	11	39		6	33
								52	1,695
		13	15	14	12	54			54
		48	106	58	276	488			244
		15	23	12	10	60			60
	10	25	66	40	6	147		44	103
		15	17	25	48	105		77	28
		1	29	6	11	47		25	22
	3	21	148	50	45	267		123	144
					2	2			
1	1	24	11	2	16	55	55		
42	402	832	832	277	388	2,773	555	416	1,802
		1				1			
293	1,501	3,164	4,652	1,819	1,507	12,936	1,081	4,047	10,442
2.26%	11.60%	24.45%	36.96%	14.06%	11.64%	99.97%	6.9%	25.9%	67.0%

BULK TANKS

(Continued from Page 44)

At this three-day meeting most impressive was the unspoken confidence emanating from the 339 who attended from all parts of the United States, Canada and overseas that the bulk milk tank is here to stay, that it is only a matter of time before practically all milk is bulk milk. No longer is the question, "Should we switch to the bulk tank? but "*How* should we switch so that there's a minimum of confusion and financial hardship to all concerned,"

Represented at the Conference were producers, processors, equipment manufacturers, professors, public health officials and the dairy press, who minutely examined and discussed the bulk tank from many points of view.

The major preoccupations of the conferees seemed to be the problems brought about by the accelerated transition from can handling with pick-up truck to bulk handling with truck tanker. Subjects especially scrutinized were selection, installation, and care of the bulk tank on the farm.

Some of the nation's leading authorities on the bulk tank presented papers and participated in discussions at the conference. Walter Ahlstrom, Carnation Company, discussed the beginnings of the bulk tank in "Why Bulk Milk Handling?" J. B. Smathers, Maryland and Virginia Milk Producers Association, discussed the factors to consider in shifting from cans to bulk. Faye Ewbank, Michigan Milk Producers Association, related the use of the bulk tank on can routes.

John Nicholas, professor of Agricultural Engineering, Pennsylvania State University, discussed the problem of selecting the tank.

Joseph Cowden, USDA, outlined the economics of every-day versus every-other-day pick-up of milk.

Other highly qualified people spoke on a wide range of matter concerning the bulk tank, but through all their discussions ran the thread of cost—"How am I going to pay for it?"

On the highly important matter of financing bulk tanks, John Clusen, Pure Milk Association, Chicago, Illinois, declared,

"Now that we have developed a need for bulk tank loans and arguments for credit, who shall make these loans? The sources of credit may be grouped into four classes of lenders:

(1) Milk Handlers

(2) Marketing Cooperatives

(3) Banks and Production Credit Associations

(4) Bulk Tank Manufacturers and Distributors

(1) *Milk Handlers:* This source of credit to the Producer is not recommended. The sellers of any product or service lose freedom of competitive marketing when obligated to a buyer. 'Tennessee' Ernie Ford's popular recording of 'Sixteen Tons' warns of 'and I owe my soul to the company store.'

(2) *Marketing Cooperatives:* This type of lending is being done by cooperatives in some markets. Twin City Milk Producers Association is carrying out a bulk tank lending program for members. This plan has many attractive features as an efficient and speedy program for financing bulk tanks. It was believed that this type of program involved too large a financial obligation for Pure Milk Association to undertake for all members. It was also believed that the Association would with little lending experience be attempting to duplicate services available from existing agencies.

(3) *Banks and Production Credit Associations:* These are established lending agencies in all farm communities. The Chicago plan set up by the joint committee and operated by Pure Milk Association involves the following:

a) The Association is constantly selling the bulk tank lending program to local banks, PCA offices, and to correspondent city banks.

b) The plan features no down payment, a conditional sales contract at not over 6 percent interest on the unpaid balance, and monthly payments of the bulk tank premium plus 5c per cwt. The minimum payment is 20c per cwt. or 1½ to 2% of the initial balance of the loan. Upon payment of $20.00 to Pure Milk Association for each bulk tank financed, a lender is assured payment up to $200.00 on any loss resulting through repossession within two years of date of purchase.

c) The milk handler or cooperative have pledged 75% of the cost of the tank in the form of premiums. Therefore, milk buyers in effect secure the producers' credit in a way that bulk tank credit may not greatly compete with producers' other uses for credit.

d) Pure Milk Association processes the papers and receives and pays out monthly installment payments, which are deducted from the milk check by assignment. The Association will also determine the total premiums paid producers against the amount of guarantee.

e) For additional security lenders may apply for Federal Housing Administration, Title 1 loan insurance for bulk tank loans. Little, if any, use of this insurance has been made in our market to date.

(4) *Bulk Tank Manufacturers' or Distributors' Financing Plans:*

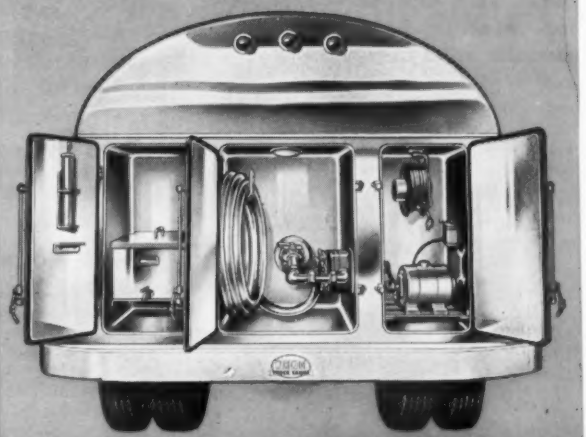
a) Two large farm equipment cooperatives are offering bulk tank financing plans comparable to the Bank and Production Credit loans.

b) At least one manufacturer is advertising a bulk tank financing plan that meets some of the conditions of the Chicago plan. We are encouraging bulk tank financing from these sources. One word of caution is that farmers should thoroughly investigate any plan before signing notes or contracts. We believe that most producers should not be required to sign chattel mortgages on other property and that interest rates should be only on unpaid balance, (not add on or discount rates)."

HAUL BIGGER PAYLOADS SAFELY... AT LOWER COST... WITH THE NEW KARI-KOOL TRUCK TANKS

KARI-KOOL Offers The Greatest Combination Of 'Wanted Features' Of Any Tanker On The Road!

Kari-Kool's advanced engineering has resulted in a tanker of greater strength and lighter weight. This means you can haul bigger payloads at lower cost. Kari-Kool's lower center of gravity and uniform weight distribution means better roadability and safer driving. The tank is fabricated from 18-8 stainless steel with No. 4 dairy finish inside. All sheets run parallel - not around - for complete drainage and greater strength. In the stainless steel 3-compartment cabinet, all mechanical equipment is mounted off the floor for easy cleaning. All corners have an extra-large radius. All doors are sealed air-tight with one-piece, snap-on, hollow-tube rubber gasket. For extra years of dependable milk hauling service, get the facts on the new Kari-Kool tanks.

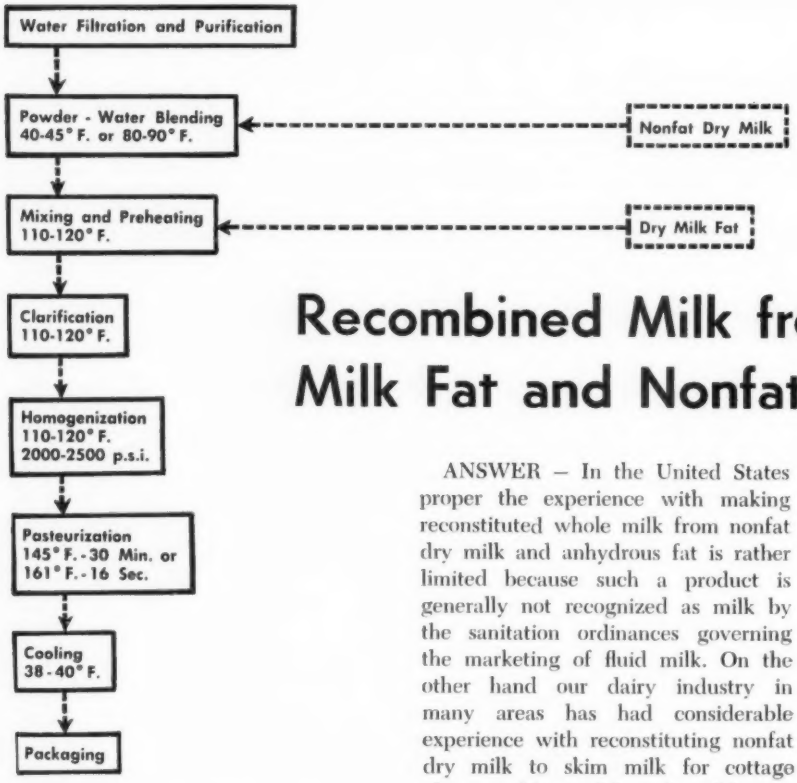


Built and Backed by the Manufacturers of
• DARI-KOOL BULK MILK COOLERS • DARI-KOOL CAN COOLERS

Dept. 12

DAIRY EQUIPMENT COMPANY
MADISON 3, WISCONSIN

RECONSTITUTED WHOLE MILK
FROM
NONFAT DRY MILK AND DRY MILK FAT



Recombined Milk from Anhydrous Milk Fat and Nonfat Powder

By V. H. NIELSEN

QUESTION—A number of U. S. Army installations are utilizing recombined milk and milk products. In compiling data and information on these items, I would be interested in obtaining information on the history and processing data for recombined milk and milk products using anhydrous milk fat and nonfat dry milk.

Major, U. S. Air Force

ANSWER — In the United States proper the experience with making reconstituted whole milk from nonfat dry milk and anhydrous fat is rather limited because such a product is generally not recognized as milk by the sanitation ordinances governing the marketing of fluid milk. On the other hand our dairy industry in many areas has had considerable experience with reconstituting nonfat dry milk to skim milk for cottage cheese making and for cultured buttermilk. Also many ice cream manufacturers use nonfat dry milk and unsalted butter when composing their mixes. The techniques of making these products are basically the same as that of making reconstituted whole milk. The exception is perhaps that, for the latter product, the quality requirements of the ingredients may be somewhat stricter because of the greater perishability of the fluid milk.

The practice of making recombined whole milk from separate fat and nonfat sources became important during and after World War II when our Armed Forces were not satisfied with reconstituted dry whole milk for beverage purposes. The main objections were difficulties with reconstitution and with palatability of the finished product. The specifications of much of the dry whole milk delivered to the military bases were not adequate to yield a product that would satisfy the troops. The problem of making dry whole milk with satisfactory keeping quality and dispersibility is, in fact, not yet solved.

Realizing the importance of an acceptable reconstituted whole milk, the U. S. Army Quartermaster Corps began investigating the possibility of preparing reconstituted whole milk from low-heat nonfat dry milk and anhydrous milk fat. In 1950 seven reconstituting plants were installed, five in Japan, one each on Okinawa and Guam. Also in that year a joint U. S. Navy-U. S. Air Force plant was built at Adak in the Aleutians.

The U. S. Quartermaster Corps at that time also outlined specifications for the nonfat dry milk and the anhydrous milk fat. To my knowledge these original standards are still in force. For the nonfat dry milk the standards are essentially the same as

ANOTHER BARKER "FIRST" No. 8504-BR for Case Fillers

Secure Bottom Stacking With Open Square Corner Pockets

No. 8504-BR for Square Quarts
Solid "NuNESTyle" Bottom Stacking
Also Available for Oblong ½ Gals.

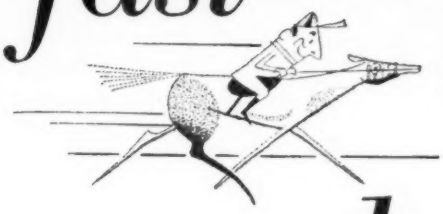
Experience has demonstrated that for case filling and stacking machines you need a trouble-free bottle case specially engineered for the job, like the Barker No. 8504-BR. Product loss and excessive breakage caused by bent partition wires, out-of-square cases, broken stacking ears and improperly spaced bottom wires is completely eliminated when you use this Barker No. 8504-BR. It provides an open square corner pocket to prevent crowding of the bottle entering the case. "Sleeve-type" compartments, available on special order, further facilitate insertion of bottles. "NuNESTyle" bottom stacking assures secure self-centering of the case. Bottom stacking models for oblong half-gallons are also available. Get the facts now on why it will pay you to start right with the Barker No. 8504-BR.

Ask Your Jobber—Or Write for Details

BARKER EQUIPMENT COMPANY

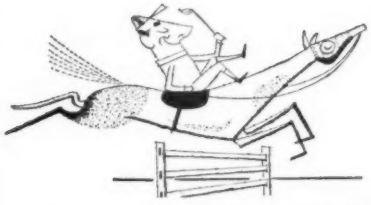
757 SEVENTH STREET KEOSAUQUA, IOWA

fast-



Cemac is beyond doubt the fastest filler on the market today. Yet, big production is not the only reason why this filler is so popular. Cemac also assures unmatched efficiency . . . economy . . . dependability. And it is built to give years of this kind of performance.

smooth -

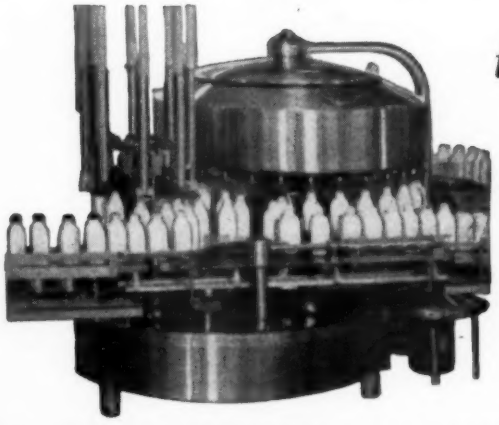


With the Cemac screw feed* incoming bottles are handled with a sure, positive touch, no matter how fast you run. Bottle breakage is reduced to absolute minimum. Constant watch over the infeed is unnecessary.

versatile -

Run square or round . . . quarts, pints or half-pints . . . creamline, chocolate, buttermilk . . . Cemac takes them all in fast, easy stride. Special bottle handling equipment* is available so you can take advantage of Cemac's outstanding speed in filling half gallons and gallons.

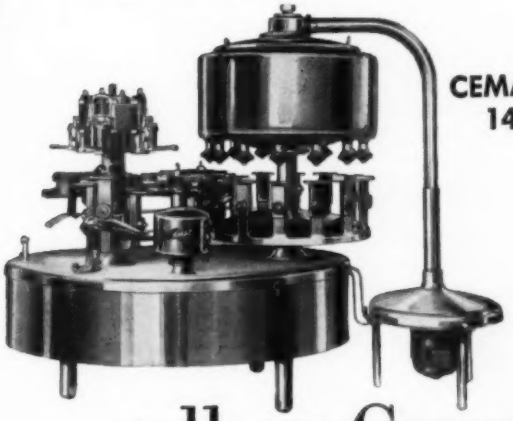
that's Cemac -



CEMAC 28

the industry's finest milk filler!

Crown Cork & Seal Company, Inc.
Baltimore 3, Maryland



CEMAC 14

* **OPTIONAL EQUIPMENT** on new Cemac 28 Fillers and may also be attached to 28's now in operation.
SCREW FEED handles quarts or small size bottles.
HALF GALLON ADAPTATION handles rectangular, round or square jugs.
GALLON ADAPTATION handles square jugs.

Hundreds of dairy owners are convinced it pays to **call on Crown!**

those of the Agricultural Marketing Service, U.S.D.A. The anhydrous milk fat must be made by removing serum solids and water from milk or sweet cream by physical means (centrifugation or heating in vacuum). The flavor and odor of the product must be sweet and clean and free from oxidized, rancid and other objectionable flavors. The following requirements must be met:

Milk fat.....not less than	99.8%
Moisture .....not more than	0.1%
Free fatty acids..not more than	0.5%
Copper .....not more than	0.25%
Peroxide value....not more than	0. %

You will notice that the dry fat must be made directly from sweet cream or milk and not by melting butter. The use of preservatives, alkalies or other chemicals is specifically prohibited. Stainless steel equipment should be used throughout to prevent copper contamination.

The reconstitution is done with equipment normally found in milk processing plants and may be carried out according to this flow diagram.

In the recombining process it is again important that all contact surfaces be of stainless steel to prevent copper or iron contamination and the development of oxidized flavors.

I am not acquainted with the reconstituting procedure that may be prescribed by the U. S. Quartermaster Corps. I doubt, in fact, if a single best procedure has been established. Canadian workers[1] have reported two methods which seem satisfactory. They are as follows.

1. Add one pound of nonfat dry milk to 10 pounds of water at 45° F. (not above 50° F.) by sprinkling the milk powder slowly over the entire surface of the water. Continue agitation until all the powder has been dispersed, then allow the mixture to stand overnight or for at least 13 hours at 45° F. Clarify the product and standardize to the correct fat content with dry milk fat. Preheat the mixture to 110-120° F. to allow complete melting of the fat. Homogenize at this temperature and at 2000-2500 p.s.i. Pasteurize and cool to 38-40° F.
2. Place the required volume of water in a mixing tank at 80-90° F. Add the milk powder slowly and continue the agitation until the mixture is homogeneous. Heat this mixture slowly to 120° F. to complete hydration of the milk proteins. Cool immediately to 40° F. and hold for 10 hours. Standardize to the correct fat content by adding dry milk fat, forewarm to 110-120° F., clarify, homogenize at 2000-2500 p.s.i., pasteurize and cool.

The pasteurization referred to in these outlines could be either the holding process (145-150° for 30 minutes) or the high temperature-short time method (161° for 10-15 seconds).

In addition to the armed forces, several American firms have developed reconstituted milk plants abroad (Hong Kong, Siam, Thailand) in localities where fresh milk is not available in adequate volume. These operations are reported to be successful beyond expectations.

---

[1]Moore, R. F., Jensen, C. U. and Gibson, D. L. Can. Dairy and Ice Cream J. 30(11):45. 1951.

MOST DAIRYMEN *PREFER*

THIS GENERAL PURPOSE DAIRY BRUSH

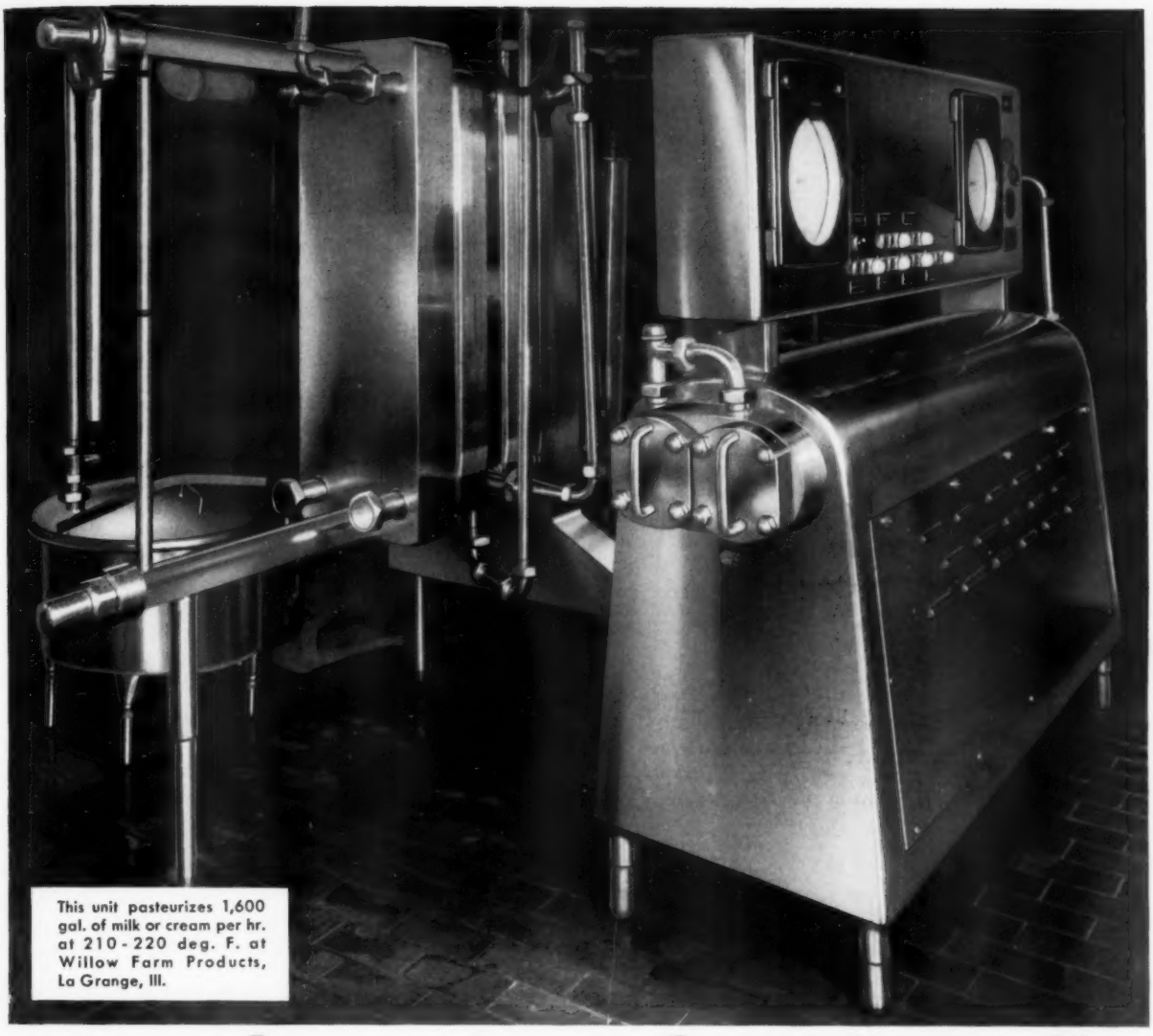
SUPER GONG® by OXCO

Super Gong does a thorough cleaning job on all types of equipment . . . vats, milk cans, separators, coolers, conveyor belts, pipes, pans . . . gets them all sparkling clean in less time with less work.

Has crimped DuPont TYNEX Nylon bristles. They're tough and flexible to give real scrubbing action . . . stand up under daily use. Solid, lightweight block lasts longer because it's waterproof . . . resists cracking or splitting . . . takes knocks, bangs and falls in stride. Molded, non-slip handle gives a firm non-tiring grip.

The Super Gong is economical . . . saves over $30.00 a year on brush replacements alone by outlasting at least 25 ordinary general purpose brushes.

Ask your Dairy Supply or Hardware jobber to let you try out the Super Gong in your plant. Order Super Gong and other quality Oxco dairy brushes now—from your favorite jobber.

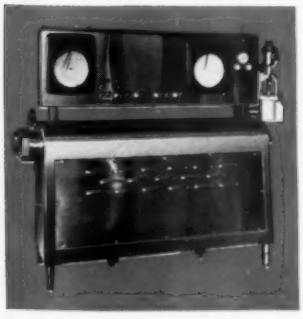


This unit pasteurizes 1,600 gal. of milk or cream per hr. at 210-220 deg. F. at Willow Farm Products, La Grange, Ill.

Another FIRST for Roswell

Pasteurizing Milk at 210-275 deg. F.

FASTER PROCESSING • FINER FLAVOR • MAXIMAL STERILITY



The Hi-Heet Roswell Unit pasteurizer fits the needs of all large or small dairies. Plants with plate type equipment can adapt it to the Roswell process as a regenerative section.

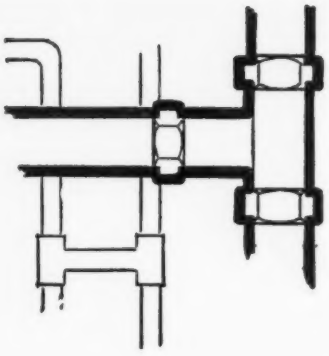
Now milk, cream, chocolate milk, is being "Roswellized" quicker, at higher heat—following the other Roswell FIRST of 4 years ago in pasteurizing ice cream mix. Roswell "Hi-Heet" pasteurizers were the first ultra high temperature, short time, continuous high capacity processors.

Get Surprising Capacity You run milk through at approximately 18,000 lb/hr at 210-275 deg. F. Capacities of 30,000 lb/hr are achieved with a 4 tube unit.

Have a More Salable, More Profitable Product Beyond amazing capacity, users are delighted with the sweeter, fresher, cleaner flavor of Roswellized milk. Bacteria is reduced almost to sterility, assuring longer shelf life, reduced returns, and greater safety, especially in long-distance shipping. You get a more uniform product that's more nutritious, easier to digest. For information on this notable advance in dairy practice write directly or contact your nearest Roswell Distributor.

hi-heet Roswell UNIT pasteurizer fits needs of all small or large dairies.

CHICAGO STAINLESS EQUIPMENT CORPORATION
5001 Elston Avenue
Chicago 30, Illinois



Plant Clinic

By R. F. HOLLAND and J. C. WHITE

Technique of Sampling Sour Products — The Market for Flake Buttermilk

Sampling Sour Products

QUESTION—How can we sample sour products or churned products in order to be sure of an accurate sample and a satisfactory Babcock test?

I. S.

ANSWER—It is very difficult to sample sour or churned products accurately but no item is impossible to sample if the proper approach is used and you are willing to accept a lesser degree of accuracy.

If a sample is sour and curdled it can often be stirred to produce a uniform body which can be sampled as a fresh product. This may take considerable work to accomplish and it may be necessary to use special equipment such as strainers and stirrers to break up the discrete particles.

If the product cannot be brought back into an homogeneous state by ordinary methods it may be necessary to use extraordinary methods such as dissolving the entire batch in some suitable solvent before an aliquot is taken. Sometimes the material may be subdivided using the techniques for sampling mixtures of dust and chunks. In this latter method the material to be sampled is piled in a heap and then a segment of the heap is taken by dividing in vertical planes, repiling and segmenting again until the proper size sample is achieved.

If milk is churned there are some special techniques which can be used. The milk can be heated to melt the fat and stirred rapidly to produce a uniform suspension. If this milk is pipetted while the sample is in motion fair results can be achieved.

The fat can be filtered off and, after careful weighing, a proportional amount of the fat is placed in the test bottle along with the calculated amount of the liquid from the sample. This latter method is tedious and inclined to be extremely inaccurate.

All the above methods are subject to error and should not be used without a complete understanding of the inaccuracies involved. Under most state laws samples which cannot be rendered homogeneous should not be tested officially.

Babcock tests on these samples may have the characteristics associated with accurate tests, golden yellow color, no included particles, clear fluid below the well-defined fat column, but still be extremely inaccurate because of the poor sampling involved.

The key to accuracy in fat testing is the sampling procedure and without careful attention to sampling techniques errors of great magnitude will occur.

Dr Robert F. Holland and Dr. James C. White have been contributing to the American Milk Review for many years. Both are members of the Dairy Department at Cornell University where they have built splendid reputations as teachers, scientists, and friends of the dairy industry. They will welcome your questions on plant problems. Please address them to either Dr. Holland or Dr. White at Stocking Hall, Cornell University, Ithaca, New York.

"Flake" Buttermilk

QUESTION—Is there a good market for flake buttermilk and how may it be produced?

Pennsylvania

ANSWER—The market for flake buttermilk in any area depends on a variety of factors. The country of origin of the population is a very real influence, the quality of the product produced and the amount of advertising and promotional work also have a considerable effect on sales. Markets for by-products such as flake buttermilk can be greatly expanded by good advertising and promotional programs. One of the most striking examples of this is the consumption of cottage cheese on the west coast of the United States.

Flake buttermilk may be produced in several ways and the method you employ will depend largely on your operation. Perhaps the simplest method and one which is easily adapted to limited production is to ripen your skimmed milk in the usual manner and then add to it while stirring a small amount of melted butter. The melted butter may be sprayed into the product by a small

XUM

WESTFALIA SEPARATOR

KRAFT FOODS installation of two Westfalia MM-5004 separators in Peru, Indiana plant. Each machine handles 16,500 lb. of whey per hour.

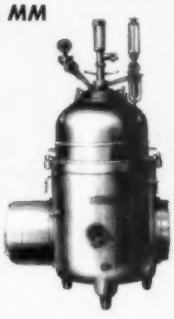
Westfalia Liquid SEAL

separators and clarifiers save you money

Here's Why

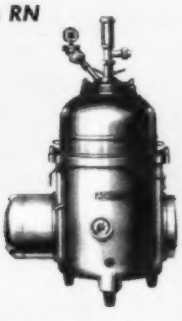
- *No seals to burn out. No leakage. No cream losses.*
- *Exclusive top feed eliminates troublesome bottom fittings and hollow spindle.*
- *Costly stopping and starting eliminated. Continuous idling between operations possible.*
- *Gravity feed—or low cost centrifugal feed pump.*
- *Foamless discharge—no additional discharge pumps needed.*
- *Special torque-controlled, low amperage motors last the life of the machine.*

series MM



Warm milk separator for fluid milk plants—easily fitted for whey separation or for clarifying-standardizing.

series RN



Highest capacity clarifier — hot or cold. Features positive clarification. Extra large sediment-holding space.

series MN MN-C

MN equipped with warm milk bowl for warm milk and whey separation —for use in butter and cheese plants. MN-C has cold milk bowl for 40°F separation.

Write for free literature:

- ☐ **MM/MN warm milk separators—bulletin 2147**
- ☐ **MN-C cold milk separator—bulletin 2103**
- ☐ **RN clarifier—bulletin 2104**

CENTRICO
INCORPORATED
75 West Forest Avenue, Englewood, N. J.

XUM

sprayer of the type normally used for insecticides, or it can be shaken in from a tin can with a number of small holes punched in the bottom. The quantity of flakes to be incorporated can be readily controlled by this method and, in all probability, the amount of fat added should not exceed 0.25 percent of the product. Flakes produced by this method are irregular and do not exactly resemble those produced by actual churning.

Actual Churning

A second method of producing flake buttermilk involves actual churning. As an example of this system, let us say that 10 cans of buttermilk are to be produced. One can should contain at least 0.75 percent milk fat, the remainder of the batch may contain none or whatever amount is desired in your finished product.

The can containing the 0.75 percent butterfat is churned, after ripening, in a small churn until granules of butter appear. The churning temperature should be approximately 68° to 70° F. After flakes of a satisfactory size and number appear, this product is blended with the remainder of the batch to incorporate the flakes in the entire lot.

Another method of producing flakes is to churn the product, or preferably a portion thereof, by pumping it with a centrifugal pump through a recirculatory system. In classwork at the college we use a container that will hold approximately five gallons of 0.75 percent fat cultured skimmed milk. This is connected to a small centrifugal pump, the discharge of which is located above the supply tank. The discharge pipe should not be submerged in the buttermilk.

The temperature of the buttermilk is maintained at 68° to 70° F. and recirculation is continued until granules of butter appear. These tend to collect on the surface and the quantity can be controlled by the length of the pumping period. After a sufficient quantity of flakes is formed, the product is incorporated with the main batch to produce flakes in the total lot.

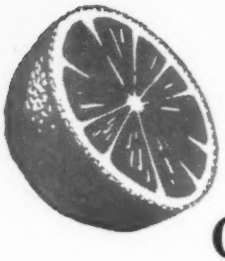
When either of the latter two methods are used to produce butter granules, it will be noted that the churned part of the batch will be of thin body. When this is incorporated with the large bulk of the product, however, this loss in body will be of no significance. It is well to add butter color to the fat in all instances in order that the flakes may be clearly visible in the finished product.

INDEPENDENTS SUE UNION

New York City's 350 independent milk delivery men, sometimes referred to as "bob-tailers," got up on their hind legs last month and filed a $1,400,000 damage suit against Local 584 of the Teamsters. The independents charged the union with engaging in a secondary boycott by bringing pressure to bear on the plants supplying them with milk. Purpose of the pressure was to force processors to cease from selling milk to the independents and thus drive them out of the market.

The suit was instituted by 23 independents on behalf of all of the bob-tailers in the market. The suit asks for $350,000 as compensation for loss and $1,050,000 punitive damages.

PENN-MICHIGAN MANUFACTURING CORP.
WEST LAFAYETTE, OHIO



why a "*reconstituted*" orange juice is best for your dairy!

Now is the time to make certain that your pure orange juice program is sound all year 'round—and that you are working on a solid foundation that will build up year after year.

From all points of view, the Krim-Ko Sun-Filled Orange Juice franchise best meets your needs. Consider these facts:

1 **Guaranteed year 'round uniformity**

Sun-filled is natural orange juice . . . no sugar, preservatives, citric acid or coloring is ever added. Your customers get the same high quality they do in all your dairy products—and they are *guaranteed* uniformity 12 months a year. Instant freezing captures the full natural flavor at the very moment of perfection.

2 **Freshly-made with maximum vitamin protection**

With Sun-Filled, your dairy's processed juice has greater retention of Vitamin C and other essential food elements . . . because there is no time lag to cause deterioration of the juice. Sun-Filled never loses its fresh orange flavor because it's delivered fresh!

Unlike so called fresh juices, your customers will never get a product that has been dragged cross country or stored for days in a warehouse.

3 **Effective Dairy-Made Orange Juice Merchandising by Krim-Ko**

And only with Sun-Filled Orange Juice can you get practical, effective advertising based on Krim-Ko's tremendous know-how and experience in dairy merchandising. Send the coupon for full details!

SUN-FILLED
ORANGE JUICE DIVISION

KRIM-KO
CORPORATION

4830 S. Christiana Ave., Chicago 32, Ill.
4920 Jefferson Highway, New Orleans, La.
629 Grove St., Jersey City, N. J.
2430 Union St., Oakland 7, Calif.
1403 The Queensway, Toronto 14, Ont., Can.

KRIM-KO CORPORATION
4830 South Christiana Ave., Chicago 32, Illinois

Without obligation rush me full details on the Krim-Ko Sun-Filled Orange Juice Plan.

Name_____

Company_____

Address_____

City_____ Zone_____ State_____

A Creamery manager discusses butter flavor and body with his assistants Expert graders are not necessary in order to make a plant inspection program effective.

The Best Way to Catch the Defects Before the Product Leaves the Plant Is to Have a Program of —

Butter Grading and Inspection Prior to Shipment

By ED GIERMAK

Exclusive feature

Immediate inspection of bulk butter shipments regardless of size is routine with receivers. Samples of each churning are reviewed by the receiver's grading staff, USDA graders, or both. The reason is obvious. Bulk butter prices paid to manufacturers as well as daily quoted prices on mercantile exchange markets are based on the quality of the product at the receiving point. Differences of opinion on quality between shipper and receiver are usually resolved on the basis of the inspection. These considerations illustrate the importance of the inspection and grading program.

Grading and inspection is accorded a very important place by receivers. Indeed it is the primary source of knowledge concerning the quality of any given shipment. The receiver's platform is the first inspection point because the majority of creameries have no systematic butter grading and inspection program immediately prior to shipment.

There are sound reasons why the butter industry should adopt a program of plant grading and inspection prior to shipment. Past and present evidence shows clearly that butter manufactured, packaged, and forwarded to the market without inspection prior to shipment has often resulted in discrepancies between what is expected and what is delivered.

There is no denying the heavy burden of responsibilities that must be assumed by the manager of a modern butter plant. Too often, however, these duties involve activities other than those related to operations within the four walls of the plant. When this trend is carried too far it can have a disastrous effect on the manager's first responsibility which is to produce a product of high quality as economically as possible. Statistics show that manufacturing discrepancies, quality and body variances, and packaging abuses often occur totally unbeknown to the plant manager and the buttermaker. They have not had occasion to supervise each intricate operation from beginning to end. Errors can and do occur.

It should be remembered that definite differences in quality and body are found when butter is graded immediately upon removal from the churn and the same butter graded after it has been bulk packaged and held in the cooler two to 10 days. The effects of temperature changes and chemical reaction within the butter itself as well as the aging process in the cooler frequently affect butter flavor. Generally all butter looks excellent when it is removed from the churn. It possesses the fresh churning blossom which, of course, disappears as the changes due to cooling, aging and chemical reaction take place. It is possible, therefore, for defects to develop and go unnoticed until the shipment arrives at the market place. Repercussions usually follow as a result of grading differences that show up at the point of receipt. The loss of valuable time, financial misunderstanding, and personal differences which result are potent arguments in favor of plant inspection and grading prior to shipment.

Edwin A. Giermak has contributed many articles to the *American Milk Review* on the subject of butter marketing and butter quality. As manager of the Marketing Association of America with offices in Chicago he is a familiar figure in the Midwest butter industry. He writes from a background of broad practical experience.

Grading and inspection prior to shipping will not necessarily qualify each participant in the plant as an expert butter grader. That is a skill acquired after years of training and experience. However, inspection at the plant will prove to be a remarkable aid to better understanding between shipper and receiver, manager and butter-maker, butter-maker and platform grader and other interested parties.

The time that such a plant inspection program will demand of plant people is a question that will doubtless be raised. There is no gainsaying the fact that a certain amount of time will be required. But the time cost must be measured against the results that the program will achieve. Actually the time requirement is not as formidable as it may seem at first glance. Under an established, well organized inspection program approximately 10 to 15 samples can be carefully inspected in 15 to 30 minutes time.

Top flight butter graders are not necessary in order to make a plant inspection program worthwhile. Many of the defects that show up at the receivers' platform do not require outstanding grading ability in order to be recognized. Plant inspection could very easily disclose the major defects.

1. Defects in the body structure of the butter. These included such items as leaky, gummy, crumbly, mealy, spongey, grainy and ragged boring.
2. Color defects such as mottled, streaky, colored specks, wavy, and varied color of each churning.
3. Negligent packaging such as improperly treated liners. Lack of salt coating can be detected by simply tasting the liner. Improperly stenciled boxes, markings too lightly inked, carelessly folded liners, unfilled corners, rough surface finishes, body imprints are other packaging defects that are pretty obvious. Cartons that are soiled, unruly, poorly taped or badly marred are not difficult to single out.
4. Subnormal quality factors can be easily detected. These are the definite flavors of the undergrade classifications such as staleness, yeasty, onion, garlic, weed, metallic, fruity, cheesy, musty, over-neutralized, definite whey, etc. Adverse surface taints can be checked by smelling liners and surfaces.

Here, three key people in the butter inspection program, the butter-maker, platform grader, and assistant, use a butter trier on a sample of bulk butter price to shipment.

Investment requirements are slight and inexpensive.

EQUIPMENT: Butter trier
Spatula
Butter Scale
Loading skid or truck; table or bench
Manifest – Grading and inspection forms.

SPACE: Clean, dust-free odor-free room adjacent to creamery or cooler, if possible; otherwise, clean available space in the creamery.

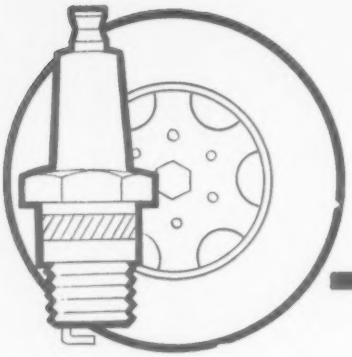
PERSONNEL: General manager
Production manager
Butter-maker
Platform grader
Trainees and all other interested personnel.

TIME: 15 to 30 minutes per shipment (10 to 15 churnings) (carefully graded and inspected).

The product and the inspection tool. The butter trier is a familiar instrument in the field of grading and inspection. It should be more widely used around the plant.

When the plant butter grading program is finished there are two ways in which the results can be used. The information can be held at the plant to be compared with any comments that may come from the market outlet or a statement of the plant grading and inspection can be included with the manifest and invoice forms which are forwarded to the market.

Few things are impossible in themselves. Their failure is more often than not caused by want of application. A plant grading and inspection program needs only a little thought, a little application of the talent that a manager is supposed to possess in order to be made to work. The resulting improvement in relationships between all phases of the butter industry is a substantial reward for the effort expended. Perhaps most important of all is the improvement in quality control at the plant that such a program would encourage.



Truck Talk

How to Figure How Much Horsepower You Need in a Truck

THE HORSEPOWER race among the passenger car manufacturing fraternity and the consequent cheers from customers has created a great deal of confusion. Perplexed by reading that 250 or 300 horsepower is used in some passenger cars to haul around 4,000 lbs. of metal and perhaps 300 lbs. of meat, a number of operators ask us, just how do you determine how much horsepower is required to go how fast with how much load.

Most puzzling seems to be the fact that the light passenger cars have far more horsepower than the heavier trucks, which also add a payload to their burden. This presents a paradox which isn't necessarily so.

In attempting to get some rational thinking applied to the problem you must remember that for the most part truck engines are rated at a more conservative horsepower—that is horsepower that the engine will go out and deliver. It will actually work at that horsepower. The passenger car engines for the most part are rated at a flash horsepower that cannot be used with the car weight and speed at which you can drive, except momentarily during acceleration. To use passenger car horsepower continuously you would have to drive at a speed that would be impossible most of the time and illegal all of the time.

While this may sound critical, it is not intended to be. The horsepower race does create progress. In that way engineers learn to build lighter, smaller engines of greater power and durability. In general they make them turn faster and still stay put, maintenance-wise. In the end you get a sounder engine.

But to get back to the question, "how much horsepower do you need" the answer is not as simple as it seems. For retail route trucks you probably do not have to consider the question because all the engine used for that purpose will get the small truck around. For the wholesale trucks and transports there may be occasion to check before purchase.

At present a Society of Automotive Engineers committee is working on a pretty complicated formula and set of work sheets to determine an answer to the question. However, these engineers are seeking a more precise answer than any fleet operator will ever need. They are attempting to determine values that can never be demonstrated.

For the fleet operator the following simple formula seems adequate. There is some chance that the ordinary operator can work it without becoming discouraged or confused.

$$\text{HP equals } \frac{\text{(GVW) (G plus RR) (MPH)}}{\text{27,100}}$$

In this formula:

HP is horsepower.

GVW is gross vehicle weight—that is the weight of the truck and load.

G is the grade in percent—that is the number of feet of rise in 100 feet of horizontal travel.

RR is the rolling resistance also expressed in percent. Concrete or blacktop is 1.5 percent. Good dirt or gravel is 2.5 percent.

MPH is the miles per hour you wish to travel up this grade.

27,100 is a constant and don't try to figure out where it comes from unless you want to get into some fairly deep mathematics.

As an example we can take a big truck and find out what horsepower is required under a given set of circumstances.

$$\frac{\text{(68,000 lbs.) (6\% plus 1.5\%) (10 mph)}}{\text{27,100}}$$

equals 189 hp required

You will note that no consideration has been given to transmission and rear axle gear ratios in this formula. This means that you will have to search through the available gear ratios to determine the right combination of transmission gear and rear axle

(Please Turn to Page 87)

Fleet costs vary as much as $3.50 per day per truck. Our monthly column, Truck Talk, conducted by a man who has spent his business life in the transportation field, is designed to help you develop a better fleet management program. Please do not hesitate to discuss your truck problems with him. Write to Truck Talk, *American Milk Review*, 92 Warren St., New York 7, New York.

DIVCO

Controls { STAND DRIVE • SIT-AND-STAND DRIVE • SIT DRIVE

Long-Lasting! Money-Saving! ROUTE TRUCKS

● YOU may not be aware of it, but you have seen DIVCOS on your city streets that have actually been in economical daily delivery service for 12 — 15 — 18 years! A new paint job occasionally and they look like new. That's why we retain the same basic Divco styling. If you are uneasy about today's mounting costs for truck maintenance and replacements, you can appreciate the immense savings that rugged, long-life Divcos could effect in your route delivery expense! In every construction detail, we build Divcos that outlast ordinary conventional trucks by years and years. Now available in 19 models, five wheelbases, four engines, in the distinctive Divco basic standard design and the new big load Dividend Series. Businesses everywhere are meeting today's challenge by buying economical long-life delivery equipment — DIVCOS!

MODELS IN 4 WHEELBASES FOR ROUTE DELIVERY

DAIRIES • FOODS
LAUNDRIES • BAKERIES
DRY CLEANERS •
FLORISTS • PARCEL •
DEP'T STORES •
NEWSPAPERS •
PAINTS •
CHEMICALS
AND
OTHERS

DIVCO TRUCK DIVISION
DIVCO-WAYNE CORPORATION • DETROIT 5, MICHIGAN

Over 80% of all DIVCOS built are still in use!

Are You in Business to Make a Profit or to Build Volume? The Question Is Important, Because as Mr. Robertson Points Out—

A Company's Purpose Controls Its Activity

By T. R. ROBERTSON, M.B.E.

This Is Part IV of a Series on Some Fundamentals of Organization

The last article in this series discussed the following points:

1. Those operations in the overall activity of an organization which are performed by one member constitute a "job".
2. No job is necessarily permanently identified with a particular man or woman.
3. The degree of specialization of job which is common in an industry tends to be inflicted willy-nilly upon every organization within that industry.
4. The activity of every organization is deliberately *arranged* into jobs.
5. Any rearrangement of jobs, of operations within jobs, or of components of activity within operations induces some change in the structural arrangement of the organization.
6. The parcelling out of operations among jobs tends to determine the pace at which an organization as a whole may proceed to its goal.

Just after the first articles in this series were published, I was asked by a dairy executive, "What practical use can I make of the fact that an organization is fundamentally an activity-producing mechanism? This idea is a new and interesting thought to me and it suggests an entirely new approach to management. I am faced, however, with directing a going concern. I have a thousand problems to solve and I just do not have the time to study every operation done by every one of our employees. What I need to know in a *general* way is how do I get my group of men and women to do what needs doing with the minimum cost in time and money. What are the overall controlling factors in the situation? As manager, what do I do to achieve *good* organization?"

This is, of course, a fair and reasonable question. It can be answered, however, only by going back to a still more fundamental question: *what causes an organization to do anything at all?* When the basic factors causing activity can be isolated, these can be controlled or adjusted and everything else will fall in line.

Fortunately there are only four such factors. They determine everything done by the men and women in an organization from the manager down to the laborer and they are the same in all organizations, big or small, whether business, military, social or political. These four factors are: the Purpose of the group, the Environment in which it operates, the Inherent Nature of the people in it, and the Methods it employs.

Every action done in an organization and the entire arrangement of its internal structure is fixed by these four factors working simultaneously. Pulling in opposing directions like a four-sided tug-of-war they keep the central core of group activity in perpetual yet ever-changing balance. By understanding the impact of these factors on his own group a manager can plan and direct his organization almost as if it were a giant machine, keeping input of effort and cost to a minimum and output of achievement to a maximum.

This is not to say that managers should be merely some sort of technical specialists or engineers; they must also in a sense, be philosophers. This fact is well demonstrated by considering the first and, in many ways, the most important of the four factors: Purpose. In studying a particular organization in order to make it more effective, it is not sufficient to ask, as would an engineer: "What is the function of this group. . . *what* do they do?" It is also necessary to ask, as would a philosopher: "What is the purpose of this group . . . *why* do they do what they do?"

As soon as one asks this question it becomes evident that there are actually two kinds, two levels, of purpose involved. First is what might be called the "private" purpose of each member. In business firms this kind of purpose is the motivating force that keeps each employee working with the company. For one person it may be "to earn a livelihood," for another

It took George Meany, the Executive Board of the C.I.O.-A.F. of L., and a Senate Investigating Committee to straighten out Dave Beck concerning the purpose of a trade union. Although this was an extreme case it shows very clearly how an entire organization can fall upon evil days when its purpose is misunderstood or prostituted.

One of the most successful organizations in the dairy industry is the California Dairy Industry Advisory Board. A major reason for that success is the definite purpose for which it exists. Here W. B. Woodburn, the organization's able manager, is shown with friends who participated in a promotional program, an activity that stemmed from the basic purpose.

it may be "to learn the dairy business," for another it may be "to enjoy a feeling of power and accomplishment." The organizational impact of these private purposes will be the subject of a later article. What is to be considered at the moment is the second, higher level of purpose . . . the purpose of the organization as a whole.

The actual case histories of two dairies which I was able to observe some years ago illustrate the importance of this second purpose. These dairies were competitors. At the time they were both about the same size, were privately owned, covered the same territory, and handled identical products. When the conditions of two companies are so perfectly similar, it should be expected that the activities and internal arrangements of organization would be almost identical. In actual fact they were not. The difference was due in this instance not to differences in the people involved, the environment in which they were working, or the methods they were using (although these, of course, had significant influence), but rather to a basic difference in the overall purposes of the two firms. Dairy A had as its purpose: "To make a profit." Dairy B, on the other hand, had as its purpose: "To increase sales volume."

Both, of course, carried on the general activity of processing dairy products, distributing them house to house, and keeping financial and other records, since in both cases this was necessary to their main purposes.

In the case of Dairy A, however, this was done with the barest minimum of people, jobs, and equipment and with the simplest possible organizational structure. All expenses were pared to the bone and no project, sales or otherwise, was undertaken unless it could be proved beforehand that it would produce a cash return. Dairy A has shown no spectacular growth but it has always been extremely profitable to its owners and continues so to this day.

Dairy B, on the other hand, had all the major departments of Dairy A plus a product research section, crews of solicitors, a public relations section and an advertising department. Even its "housekeeping" activities were more elaborate and it carried on a whole series of special projects designed to gain more business. All of the profits which, in Dairy A, were garnered by the owners, were in Dairy B plowed back into securing more customers and into providing the ever larger plant and staff which were required as the result of growth. Needless to say, Dairy B has far outstripped its competitor in size, although it has never paid a dividend.

There is no question here of deciding which is the *better* purpose; each organization was successful in achieving its own goal. What is important is that *merely* because the purpose of Dairy A was different from that of Dairy B, their activities (in many instances right down to the task of each employee) were different and that inevitably the internal structures of the two organizations were also different.

Because the overall purpose of a company influences its entire operation, it is a matter for serious concern. It is the one field in which Top Management not only can, but is expected to, maintain full control, and in which, moreover, *it must take full and final responsibility.*

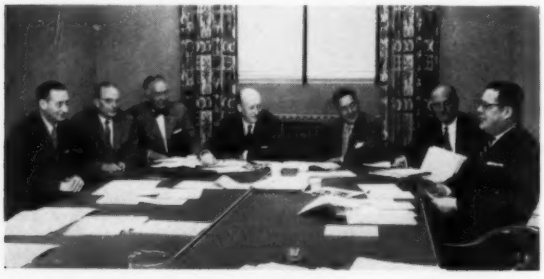
Now, while it is not difficult to be aware in a general way that one's own organization acts to achieve some purpose, it is by no means always

easy to say precisely what that purpose is. To state it fully, clearly and exactly requires rigorous thought. It takes care to distinguish what should be, or might be, and what actually is. The effort to do this must be expended, however, for very little reflection must make it obvious that *until an organization's purpose can be exactly stated, there never can be a yardstick by which to measure the relevance, usefulness, or necessity of a single one of its operations.*

More than all other factors combined, purpose, or rather lack of it, is responsible for problems and difficulties in organization. Even in the relatively few companies which do ask "what is it that we are purposing to do?", most fail to arrive at a precise and explicit answer. Those that are concerned primarily with providing the public with some excuse for their being in business are apt to prepare empty, high-sounding statements that really mean little or nothing. Those that are concerned only with the opinions of their own employees frequently avoid frank statements and express their objectives in terms so vague that no one can take exception to them. Thus, in defining their objectives organizations in the Dairy Industry speak of "providing essential service to the community," "contributing to public health," "guaranteeing a supply of Nature's most perfect food." These are not the purposes of a business but only the means to an end. That end almost invariably has to do with gaining some form of value in terms of money.

For the building of good public relations vague expressions of community usefulness are often of great value. As an aid to building a trim, hard-hitting organization, however, they do more harm than good.

Of the four major factors which affect activity, Purpose is the only one which is concerned exclusively with ideas. In expressing an organization's purpose, therefore, it is important to capture the idea of it fully and exactly. The distinction between a vague, general statement of purpose and a clear, exact one is important. Upon the difference depends whether or not the things done by an organization are relevant to the true objectives for which it is striving. It is frequent for a company to carry on energy-consuming operations which seem justified by a poorly defined purpose but which are really wasted because its real purpose, when it comes to the final point, is simple and explicit. If the employees are confused about this, if the limitations of purpose are not well understood by all, it is inevitable that well-meant but worthless work will be carried on as part of every job throughout the organization. Over-elaborate systems will be maintained. Preparations made in one department for later operations to be performed in another will be inappropriate or too extensive. Projects doomed to be killed by Top Management will be started and will absorb precious time and energy.



The purpose of an organization influences its entire operation. It is the one field in which top management is expected to maintain full control.

People in business do not deliberately do work they know is useless. They are guided in their activity by what they believe the purpose of their group to be. They interpret that purpose in relation to their own jobs. If their belief is wrong, or if the purpose is so vague almost any interpretation of it can be justified, then their actions will be inappropriate or poorly integrated. In either case they will have expended time and energy wastefully.

One of the salesmen who calls on me works in an industry which is presently undergoing extreme economic strain. He is confused and so am I by an apparent lack of clear purpose in the organization to which he belongs. His management, under the pressure of competition and the changing times, evidently cannot decide which is their true objective; increased profits or increased sales. At one visit he works hard to sell me every item in his entire line, apparently working under instructions to build up total sales volume (or, alternatively, to gain an outlet for every product his firm manufactures). At the very next visit he promotes only certain items, stating frankly that the others are carried at no profit merely as a service to his firm's customers. At this visit, it would seem, the objective is not sales volume but purely and simply net gain. How can a salesman do effective work under such conditions of indecision? If the situation continues, his customers are apt to say "a pox on both your propositions," leave him, and buy from his competitors who know exactly what is expected of them and why.

The need for a clear purpose does not mean that every organization's purpose must be single and simple. It may quite properly be both multiple and complex. It is only when people unintentionally follow the wrong purpose or mistake the difference between a major and a minor purpose that confusion and inefficiency result.

A systematic method of determining the purpose of any organization will be the subject of the next article. The particular method is not, however, the point of major importance. What is absolutely imperative in every group enterprise is that there be some clear-cut statement of purpose, that it be made known to every member and that if it is changed the change is likewise made generally known. This defining of objectives is one of the most practical tools of management. It permits the guiding of mass action along the most effective channels without the necessity of analyzing the minor details of each job. Just as a seaman can control the passage of a mighty ocean liner by means of a well-designed rudder, so management can direct and redirect the activity of a company by defining and promulgating clear, frank purposes.

T. B. Robertson, the author of this series of articles on the basic principles of organization, is a former sales manager for Arden Farms in California. A fifth article will appear in an early issue of the *American Milk Review*.

THE NEW DESIGNS ARE COMING FROM HEIL

TAKE NO RISKS

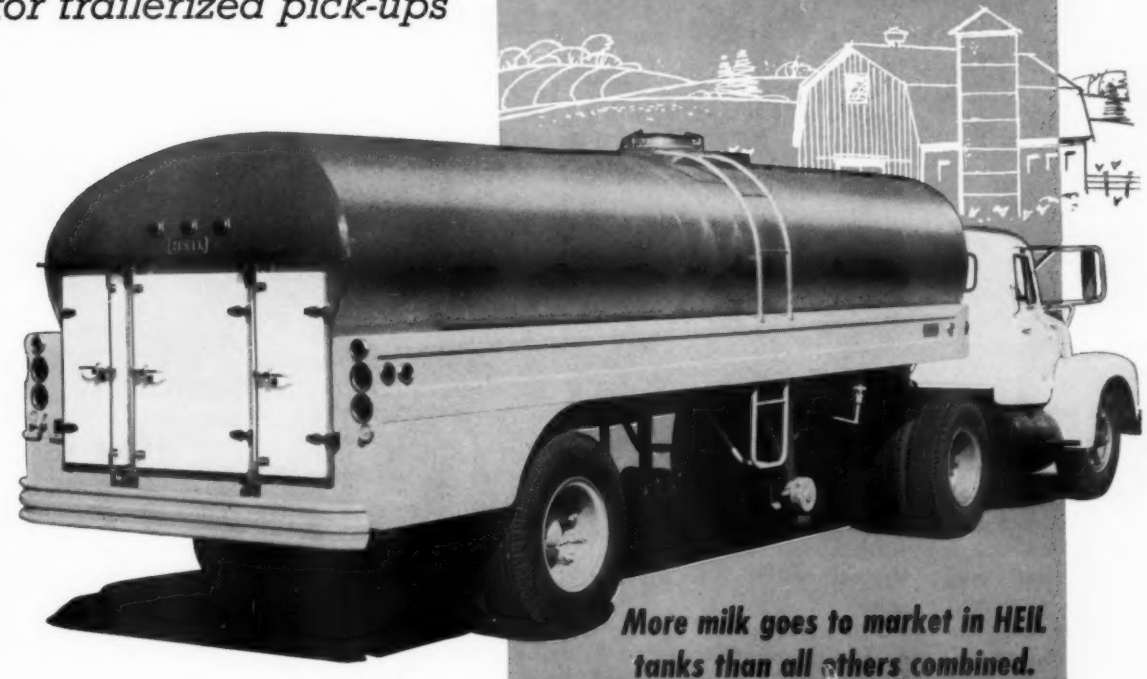
...specify HEIL for trailerized pick-ups

If your bulk milk operations are ready for the payload economies of trailerized farm pick-ups, specify Heil. Heil alone offers you the protection of 30 years' experience in building thousands of milk tank trailers. Heil built the industry's first welded stainless steel transport tank in 1927.

There is no guesswork in a Heil trailer design—it has been proved by millions of miles of over-the-highway service. Can you afford to take a chance on material costing up to $1,300 a ton? Heil advanced design combines strength with light weight, and the same 3-compartment convenience and sanitation advantage you now enjoy in Heil truck-mounted tanks.

You'll be surprised how easy it is to own a Heil trailerized pick up ... proved design backed with experience and leadership. For the years ahead—go trailerized with Heil.

Immediate delivery on all popular models.



More milk goes to market in HEIL tanks than all others combined.

other HEIL products for the Dairy Industry

Cylindrical and rectangular cooling and storage tanks.

FRIGID-LITE* plastic farm bulk pick-up tanks

Stainless steel trailerized transport tanks

FRIGID-LITE* trailerized transport tanks

*Registered

THE HEIL CO.

Dept. 992, 3000 W. Montana Street, Milwaukee 1, Wis.

Factories:
Milwaukee, Wis., Hillside, N. J., Lancaster, Pa.

Milk is a unique feature of the school milk program at Nicolet High School. Dispenser at left sells malted milk. Dispenser in center furnishes white milk while vending machine at left sells chocolate milk.

Primary school children in Tomah, Wisconsin get milk during morning and afternoon recess periods as well as at lunch time. Some schools have taught children to serve themselves, others like to have an adult operate the dispenser.

Bulk Milk Dispensers in the School Milk Program

By JEANETTE HAMPTON

SCHOOLS RANK AHEAD OF MANY restaurants and institutions as potential consumers of fluid milk. They are becoming a bigger market every year.

Schools serve milk in a variety of ways. Some use automatic vending machines. Some serve the milk in glass or paper packages. Some use bulk dispensers. Until recently dispensers were held back because of variations in local and state health regulations. The equipment has now progressed to the point where it can be used in schools in every state. This article is the first report of an intensive study of a group of schools that have been using milk dispensers for six months or more.

In late 1956 the Paper Cup and Container Institute conducted a survey in Wisconsin which included visits to some 30 schools and an extensive study of 16 schools that had used dispensers for periods of six months or longer.

Highlights of the findings were:

1. Installation of bulk milk dispensers is always followed by a distinct increase in milk consumption.
2. Milk dispensers are an efficient way to serve milk and offer no operating problems.
3. Disposable paper cups, cone or flat-bottom, can be handled satisfactorily by children of all grade levels under all serving conditions observed.
4. Fluid milk plant operators have played an important part in getting dispensers installed and keeping school officials satisfied with the equipment.

Since the time when dispensers were installed, the schools studied have increased their average daily consumption of milk from 39 half-pint servings per 100 students to 90 servings per hundred—a gross gain of 130%.

With the many factors bearing on milk consumption in schools, it is not possible to credit dispensers alone with this large increase. Some schools, however, adopted dispensers under conditions that made it possible to see exactly what the gains were that could be attributed to the new equipment.

School authorities said that dispensers add to consumption because they provide additional stations at which milk can be obtained—sometimes for longer periods during the day—and because they keep milk cold.

Three of every four of the school systems studied use dispensers as part of their lunch service. One of every two uses them during mid-morning or afternoon intervals.

When Dispensers Are Used

	Number of Schools
Noon meal	12
Mid-morning	10
Mid-afternoon	7
All day	4
At start of school	1
At close of school	1

Note: Figures add to more than 16 schools because some officials listed more than one occasion.

Most of the schools using dispensers at the noon meal put them right into the self-service line in the school lunch room. When dispensers are used at other times, the machines are most frequently installed in corridors or alcoves off corridors. They are also being used in all-purpose rooms, study halls, basement facilities and, in one

Now it's here...the highest quality instant nonfat dry milk...

INSTANT TEKKO

New, exclusive crystallization process...dissolves instantly

New *Instant Tekko* makes it easy for you to produce a better dairy product. It acts and tastes just like fresh fluid skim milk. Tekko's crystals dissolve instantly. No separate machine-mixing process is needed. Low-heat Instant Tekko retains its protein structure and curd-forming characteristics. This assures you of superior uniformity, high quality and the desired "fresh milk" flavor. Here's how new Instant Tekko can improve some of your products:

1. Skim Milk—Makes it easy to build-up solids level. Substantially improves taste; has higher nutritional value.

2. Buttermilk—Has better protein stability and fuller curd-forming factors. Adds greater flavor; aids you in boosting quality.

3. Cottage Cheese—Exhibits more constant curd-forming characteristics, flavor and richness. Provides longer shelf life.

4. Ice Cream—You get none of the shrinkage normally caused by unstable milk protein. You do get a more mouth-watering flavor.

New *Instant Tekko* is made from high quality fresh fluid milk. It's the most efficient skim milk on the market today. Try it; see for yourself how it can save you time, labor, equipment... and money!

For additional information and working samples, write office nearest you. Address: Technical Service Department 125.

Western Condensing Company

GOLDEN STATE SALES CORPORATION

Appleton, Wisconsin • San Francisco, California

golden state

case in a special dairy bar featuring white, chocolate and malted milk.

The fact that they provide cold milk is especially important in increasing milk consumption in schools. Schools have traditionally been plagued with the problem of finding sufficient refrigerator space for their daily milk supplies. In a number of the schools the dispensers offered sufficient extra refrigeration capacity to solve this problem completely. In the other schools the five-gallon reserve cans could generally be kept in walk-in refrigerators.

Some educators in the past have questioned whether dispensers would create problems in filling the cups to a full 8-ounces without overflowing. Thirteen of the fifteen systems responding, stated that there was no trouble with the milk foaming or overflowing. One administrator explained that it was possible for the operator to draw the milk too fast but that there was no need to do so. Another pointed out that even if there is foam, a 10-ounce cup allows ample room for foam on top of an 8-ounce serving of milk.

Opinions as to whether the dispensers required operators was divided. Eight of 16 respondents use either non-professional help, or a teacher or a student to speed distribution of milk and, especially, to serve younger children. Three superintendents drew a clear line: operators in primary schools, self-service in high schools. Some primary school officials insisted, however, that younger children can be quickly trained to handle the serving of their own milk neatly and expeditiously.

Fourteen of the sixteen school systems reporting stated that they found no special problems with speed of service in handling long lines of students. Two schools noted that there might be a problem but stated that they have none because their children go to lunch by grades or shifts. One official stated that he had a problem until he stationed students to fill cups and dispose of the empty ones. Another gets his lunch-time service off to a fast start by having 25 cups of milk drawn immediately in advance.

The survey revealed a high degree of cooperation between milk plant operators and the schools using dispensers. Almost all schools reported that dairies had installed the equipment without charge and in half of the cases the dairies had provided the schools with dispensers rent free or at low rates per gallon of milk sold. The schools repeatedly expressed their confidence that the dairies would handle any repairs that should become necessary.

Equipment Used

The machines most commonly used hold two 5-gallon cans. For larger volume locations, dispensers accommodating three 5-gallon cans are often employed. Some of the machines provide a cut-off device that makes it possible to deliver a specified quantity of milk automatically. The great majority of the schools were using equipment without automatic cut-off, however. One was using a coin-operated unit.

School systems vary the sizes and makes of dispensers according to need in their various buildings. The largest dispenser program used three of the 10-gallon units and four of the 15-gallon size.

(Please Turn to Page 115)

QuiKold RINGS UP PROFITS FASTER!

builds greater Milk and Dairy product sales

MODEL 1400-WD-2

Trim, modern S & S QuiKold coolers build greater milk sales in food stores, restaurants, delicatessens, schools, dairy stores and all locations where dairy products are sold. They provide large storage space for package or bottle milk and dairy products . . . yet require a very minimum of floor space to return greater profits per square foot of floor area used.

QuiKold cool-R-in coils are in the storage area . . . not inside the cooler walls . . . to assure maximum efficiency. Cooling is fast and economical . . . with proper temperatures maintained uniformly in every part of the storage compartment. Guaranteed dependability of construction and operating mechanism means long life with low maintenance.

There's a QuiKold cooler to meet the needs of every location . . . Order yours in any quantity, large or small, at no extra cost. QuiKold electric coolers are Underwriters' Laboratories approved. Write for free catalog today. SSD1

ORDINARY QUIKOLD

The secret of QuiKold's greater efficiency is right in the storage area — QuiKold cool-R-in coils.

S&S Products, inc.

P. O. BOX 1047 LIMA, OHIO

BUILDERS OF BETTER BEVERAGE COOLERS — SINCE 1926

without benefit of doorbell

question—
"What salesman gets in any home, early in the morning, without punching doorbells?"

answer—
"A Lamb Glass Bottle, full of milk with the bottler's message in cheerful colored design."

Are you making best use of *your* "silent salesmen" to sell your milk and dairy products through bright, attention getting ACL designs?

Quality Lamb Glass Bottles with ACL designs ring up more selling punch . . . without punching doorbells.

THE LAMB GLASS COMPANY

Mount Vernon, Ohio

Over 35 years devoted to serving the dairy industry

When Does Peaceful Picketing Become Illegal?

By ALBERT W. GRAY

"The right of labor to picket peacefully in order to chieve a legitimate objective by the application of economic pressure is recognized by the law and the courts. The objective, however, must be legal. Picketing, no matter how peaceful, is illegal if carried on for illegal purposes."

Exclusive feature

Peaceful picketing in labor controversies is held illegal by the courts under a simple rule, that picketing, however peaceful, if carried on for an illegal purpose, is illegal.

Before the New Jersey Supreme Court a few months ago was an appeal from a decision of a lower court refusing to grant an injunction against the picketing of Deckers Dairy at Hightstown in that state and some of its customers. For 30 years this dairy has been in business in that vicinity, buying milk from local farmers and, after processing, selling it to stores, restaurants, and other consumers.

Difficulty arose when five of the 52 employees were discharged during the early months of the year. That act of the dairy company was followed by the peaceful picketing under the direction of a local of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen, and Helpers of America.

Signs displayed by these pickets advised, at the beginning, that the dairy was unfair to union labor. Later they were changed to "Deckers Dairy is not signed up with Milk Drivers and Dairy Employees Local 680. Please do not purchase Deckers dairy products." As a consequence the milk sales of the dairy dropped 2000 quarts a day.

At a meeting of the employees of the company it was discussed whether or not they should consider union membership. The majority were in favor of organizing an independent union. Three employees advocated membership in a national affiliated union and more, that an informal employer-employee committee undertake the solution of any labor relation problems that might arise.

An independent union was formed and the picketing continued. Suit was then brought by the dairy company for an injunction against the picketing and the application denied by the lower court. "I think a union may picket to try to convince the workers to change from one union to another

How aluminum helped sell all these products

MORE IMPORTANT... HOW AlumaSEAL HOODS CAN HELP YOU SELL MORE MILK

It pays to study the buying habits of your customers—habits that often give you clues to ways to increase your own sales.

For example, you find more and more perishables protected by aluminum in the typical home. Housewives have learned that aluminum lasts for the life of the product it protects, keeping it fresh and flavorful. They know aluminum won't tear, soil, or fray.

What's more perishable than milk? How many new customers could you win with the lure of AlumaSEAL Hoods? How many of your present customers would appreciate the extra protection you could give their milk with AlumaSEAL?

If the idea appeals to you, it's a simple matter for us to adapt your present cap design to AlumaSEAL . . . or develop a completely new design from your choice of 12 brilliant colors.

Talk to your dairy supply jobber for more information. Or write us direct at Oneida, N. Y.

Notice the exclusive hinge on these AlumaSEAL hoods made for 48 to 56mm bottles. Snaps open, snaps shut on a hinge. And it really *snaps* shut so your milk stays fresh to the last drop.

New AlumaSEAL hood for 38mm bottles. You can add the lure of AlumaSEAL to this popular new-size bottle, too. Special heat-treating helps AlumaSEAL hold its snap-off, snap-on ability.

SMITH-LEE CO., INC., ONEIDA, N. Y.

SPECIALISTS IN DAIRY PACKAGING

MEMBER NATIONAL DAIRY COUNCIL

and I don't care if there has been an election or hasn't been an election."

In its refusal to adopt this conclusion of the lower court, it was pointed out by the Supreme Court of that state that the employees of this small local dairy had freely exercised their legal right to organize and bargain through their own representative. In opposition to the exercise of this legal right of the employees the opposing union was using this picket line to force an agreement which neither the dairy nor the employees wished.

"Freedom of choice in selecting one's bargaining agent is the very essence of collective bargaining," said the court in conclusion. "The courts of this state have recognized that the New Jersey Constitution guarantees this freedom of choice and should we depart from this proposition the recognition given by our Constitution to private employees would be set at naught.

"The right is implicit in the right to organize and bargain collectively and therefore is to be accorded the same recognition as though it were expressly recited. The present picketing is aimed at thwarting this free choice through economic pressure upon the employer which has reached to the employees because of the continued loss of business."

Refused to Persuade

Picketing in another instance that, although peaceful, was attended with this same illegal purpose, arose from union activities of this character in Elkhart, Indiana. In that instance the Cook Bros. Dairy frankly told the representative of a labor union that it would willingly sign a union labor contract permitting employees to join this union. But on the other hand, the company absolutely refused to use any effort or persuasion to force union membership on any of those of its employees who did not wish to join a union.

This dairy, the president of that company insisted, was to be operated on an open shop basis and no employee would be coerced into such membership. No employee had asked for union recognition and no labor dispute had arisen between the management and the employees.

On the day following this refusal of the president of the company there was set up a picket line around the plant and also pickets followed the delivery trucks of the company in an effort to prevent the sales of the dairy's products as well as the delivery by others of supplies needed in the operation of their plant.

Union Appealed Order

The union appealed from an order granting an injunction against a continuance of this picket line. In sustaining that injunction the court said of the illegality of the union's efforts at establishing a closed shop that under present conditions a workman is usually helpless to guard his own right to work or bargain for acceptable working terms.

While he should be free to accept membership in a union, he should, on the other hand, be free of interference or coercion of union or union agents or other concerted activities for collective bargaining.

"Any person or group which undertakes to coerce an employer to do that which is contrary to the express policy of the state thereby undertakes to compel the performance of an unlawful act," asserted the court.

"The lawful weapon of peaceful picketing may not be utilized to accomplish such an unlawful purpose. It is quite immaterial that the things done to bring about the unlawful purpose were not in themselves unlawful."

Not only is the employment of a picket line illegal either to gain a preference for the union as a representative of employees or to impose upon an employer the arbitrary and unjust features of a closed shop agreement, but it is equally illegal when the picketing, however peaceful, is not a feature of a labor dispute.

A few years ago the Adams Dairy at Blue Springs, Missouri, was picketed by a union when the dairy had discontinued the use of its own trucks and contracted with independent truckers for making deliveries.

In its review of the situation the court pointed out, in deciding an action brought by this dairy company for an injunction, that picketing was lawful only in connection with a labor dispute, that is, a controversy over the terms and conditions of employment.

Here the dairy had abandoned the delivery of milk by its own trucks, which it had a right to do. Its business could have been sold without consulting the union. A grocer may stop conducting his business on a credit basis and sell only for cash. Such actions, the court commented in its decision, were not the subjects for labor disputes.

"It is the prerogative of any business man, with or without reason, to continue or discontinue his business, to change, alter, or modify the nature of his business as he sees fit without the necessity of explanation or excuse to anyone.

"Since the action of the dairy in discontinuing the delivery of milk was not within the scope of the labor contract, the union was not authorized to picket or to strike and it follows that the threatened strike and picketing were unlawful."

Washington Statute

In the state of Washington is a statute that workers shall be free from coercion, interference, or restraints of employers. It was said in a celebrated decision of the United States Supreme Court of the application of this policy to the interference by labor with employer activities:

"The broad purpose of the act from which this policy flows was to prevent unreasonable judicial interference with legitimate objectives of workers. But abuse by workers or organizations of workers of the declared public policy of such an act is no more to be condoned than violations of prohibitions against judicial interference with certain activities of workers."

Then in sustaining the injunction that had been granted against the picketing in this instance the court added, "The injunction granted was tailored to prevent a specific violation of an important state law. The decree was limited to the wrong being perpetrated, namely, the abusive exercise of the right to picket."

REFERENCES

Independent Dairy Workers Union of Hightstown v. Milk Drivers and Dairy Employees Local etc., 127 Atl. 2d 869, New Jersey, December 17, 1956

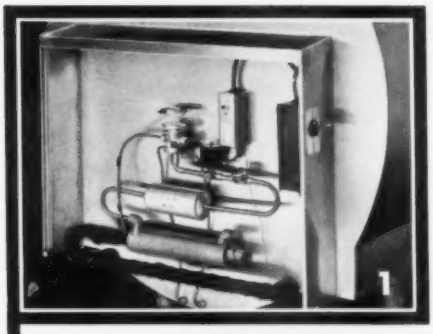
Murrin V. Cook Bros. Dairy, 138 N.E.2d 907, Indiana, November 9, 1956

Adams Dairy Co. v. Dairy Employees Union, 250 S.W.2d 481, Missouri, May 12, 1952

Building Service Employees International Union v. Gazzam, 339 U.S. 454, Michigan, May 8, 1950

the bulk tank with the built-in extras

EM-BEE BULK MILK TANKS

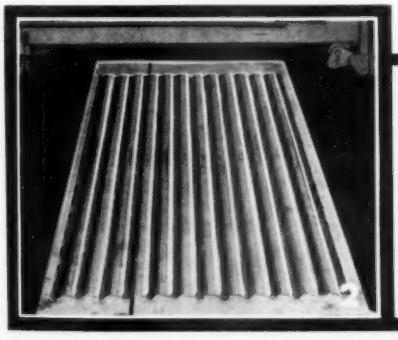


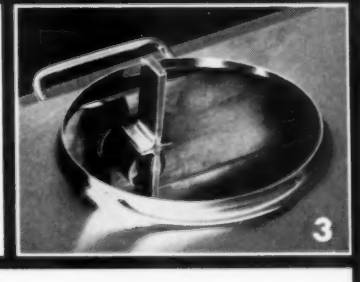
. . . offer the most complete direct expansion line on the market . . . in either all-stainless steel or painted, mild steel exteriors. Self-contained models range from 150 through 300 gallons and remote models from 150 through 1500 gallons. Cylindrical design assures maximum strength. Choose the dependable, efficient EM-BEE that fits your needs and you'll agree that, "You Never Handled It So Good"!

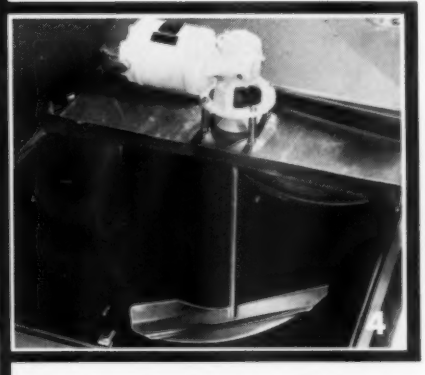
1 Complete control panel mounted on end of tank includes, temperature controller, expansion valve, heat exchanger, refrigerant drier, sight glass, solenoid valve, manual agitator timer, and off-on switch.

2 All-stainless steel serpentine-type cooling coil is continuously welded to the inner liner of the tank providing for maximum heat transfer.

3 Stainless steel calibration stick has handle protruding above tank cover away from milk zone.

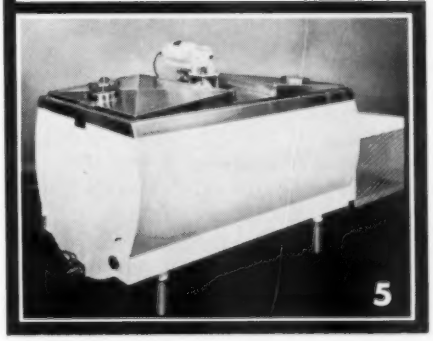






4 Agitator is all-stainless steel and driven by powerful gearhead motor. Pipeline inlet is a 1½" covered opening in one dump hole cover offering greater flexibility in positioning tank.

5 For those who prefer the added economy, convenience, and compactness of a complete cooling unit, EM-BEE offers self-contained models in sizes from 150 through 300 gallon.



DISTRIBUTORSHIPS AVAILABLE IN SOME AREAS

PAUL MUELLER COMPANY

KANSAS AVENUE AT PHELPS • SPRINGFIELD, MISSOURI

The body in an elevated position. The entire body can be raised to any height up to 52 inches. In this picture space between the tires and the body gives some indication of the distance it has been raised

When the body is lowered to curb level it is enough to make motorists take a second look. The control panel that contains the operating levers is on the right rear side of this body just above the light.

Truck Body Can Be Raised or Lowered to Desired Height

A TRUCK EQUIPPED with hydraulic controls that can raise or lower the body to match any platform from curb to loading dock level has been demonstrated in several major cities. Known as the Thompson LO-Loader after its manufacturer the Thompson Trailer Corporation, the equipment is a spectacular advance in the field of materials handling.

We witnessed a demonstration of the body in New York a few weeks ago. Not only could the body be raised several feet above its normal level and lowered so that it was flush with the curb but it could be tilted sideways to the right or left or slanted from front to back or back to front as the operator desired. The ability to tilt the floor in any direction, of course, gives the unloading operation the benefit of gravity.

The mechanism that moves the body is a hydraulic piston located near the axles. The springs appear to pivot around the axle as the body moves up or down and are locked into place when the body returns to normal level for over the road travel. Controls are located in a panel box on the right rear side of the body. They consist of a series of levers about ten inches long. Individual levers govern specific actions of the body.

It is our understanding that the Lo-Loader can be used on any make of truck. It is available with van, refrigerated, stake, or platform bodies.

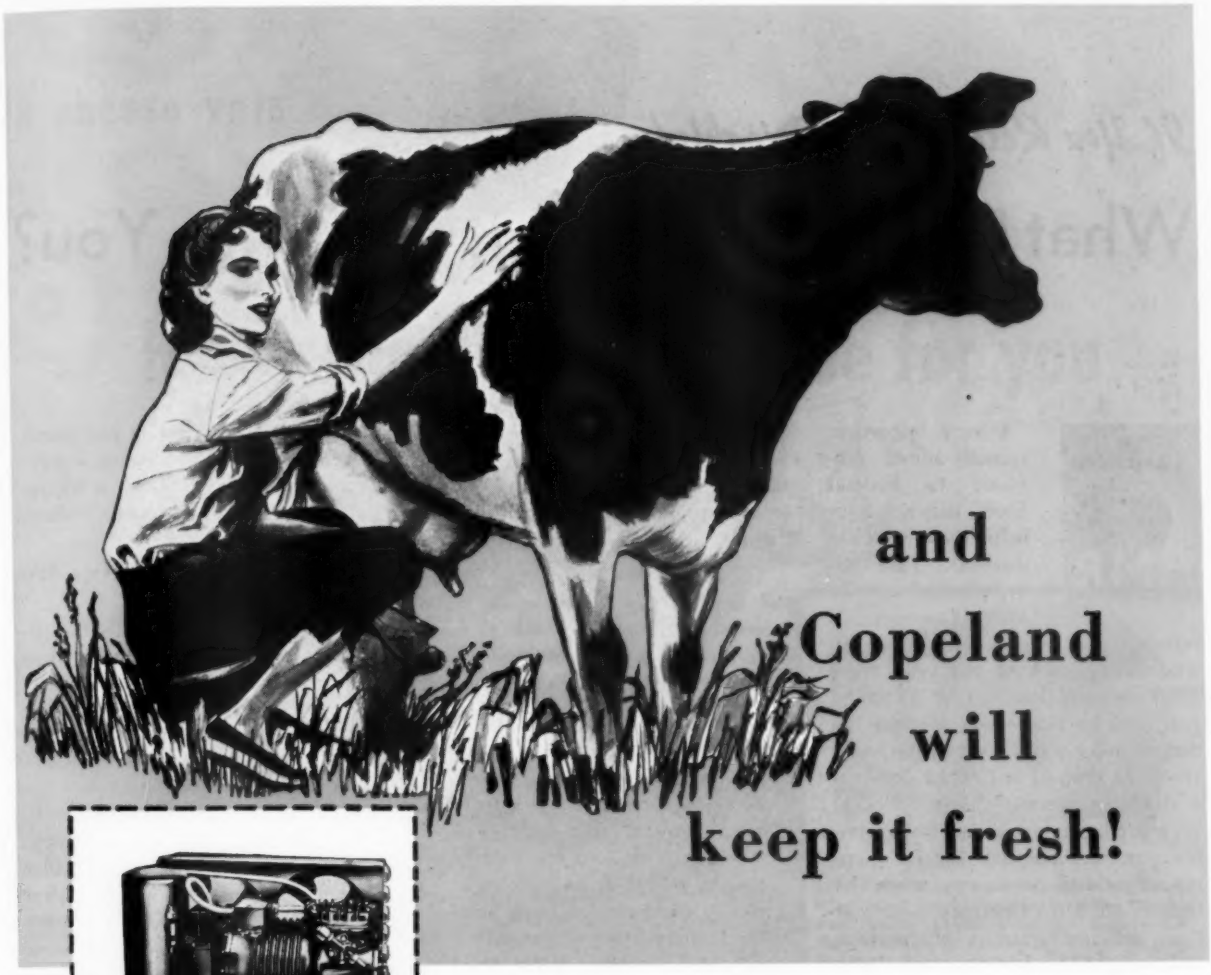
Power to operate the hydraulic lifting mechanism comes from the truck engine. In the demonstration that we witnessed the driver accelerated the engine a little above idling speed, got out of the cab, pulled one of the control levers and in about 20 to 30 seconds from the time he left the cab, had the body at curb level ready to unload.

In addition to the remarkable sight of a truck body adjusting itself to the unloading platform there were three other features that caught our eye. A steel ramp is carried in the truck to take care of the three or four inches difference between the surface of the street and the floor of the body when it is at the street level. In case of a flat tire the driver puts the steel ramp on its side under the body, pulls the lowering level and, instead of the body going down, which it cannot do because the ramp is blocking its descent, the wheel is raised. It took a matter of seconds to get the wheel off the ground.

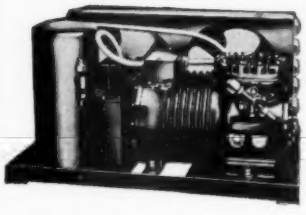
A second feature which, recalling the problem of drivers pulling away from the ammonia line with the hose still coupled, made a great deal of sense, was an automatic adjustment feature in the control box. When the control box cover is closed all levers are pushed into place and the body returns to its normal position.

Tied in with the hydraulic mechanism is a steel pin about an inch in diameter which engages the spring when the truck is moving but which is retracted when the body is being raised or lowered in order to permit the springs to pivot.

If, perchance, you would like more information on this subject write to Thompson Trailer Corporation, 2 Old Court Road, Pikesville 8, Maryland.



and Copeland will keep it fresh!



CAPACITY

Choose from ½ to 3 H.P. in Copelametic, the direct-drive accessible hermetic, and economical belt-driven models. Model TR-100 shown.

DEPENDABILITY

Thousands of Copeland units now in use have given years of trouble-free, over-the-road service—proof of superior engineering, ruggedness and dependability.

AVAILABILITY

Our unexcelled coast-to-coast network of 130 wholesalers and over 25,000 refrigeration dealers means the best in service when you need it. It's only a phone call away.

From milking to market, the trend today is to modern mechanical refrigeration.

The refrigeration for this equipment is engineered and built by Copeland. Copeland compressors efficiently provide the constant cold needed for bulk transit, storage, processing, retail marketing and multi-stop deliveries. Whatever the application, a Copeland unit meets critical needs at lowest cost per hour or per mile.

SINCE 1918

Copeland REFRIGERATION CORPORATION, Sidney, Ohio

WRITE FOR SPECIFICATIONS AND PERFORMANCE DATA

If You Retire or Are Disabled

What Does Social Security Mean to You?

By ALLAN J. PARKER

Exclusive feature AMR

A very important, recently-added provision to Federal Social Security laws helps those who are disabled. Take the hypothetical case of Mike Guernsey, a self-employed milk hauler aged 40, who during each of the years from 1956 through 1961 earns $5,000 a year from his business—well above the maximum for Social Security purposes. However, suppose in 1962 he develops a disabling chronic illness, physical or mental, requiring indefinite confinement to a hospital. But for these recently-added provisions, when he became 65, Mike Guernsey might not have sufficient quarters of coverage to be eligible for benefits at all. Even if he were eligible, because of the large number of years of no earnings from self-employment to be taken into account in figuring his average wages or net earnings, the benefits would be extremely small. Now, however, it is provided that any period of blindness or total disability which renders an individual unable to engage in any substantial gainful activity, will be disregarded in computing benefits. Thus, there is a "freeze" so that under these conditions, Mike loses no benefits because of his disability.

In order for Mike Guernsey to qualify for the disability "freeze" (or disability benefits), he must have been covered by Social Security for a fairly substantial period of time. The period of disability must be continuous for at least six full months before these "freeze" provisions go into effect.

Once his disability is established, not only is Mike "frozen" into his insured status, but he also may start drawing disability benefits at the age of 50 instead of waiting until 65. The Social Security Administration's rules are strict as to what constitutes a disability. It means inability to perform *any* gainful work, not merely inability to perform your regular work.

These disability benefits are in the full amount that Mike would have received as an old-age benefit based on his earnings prior to disability if he had reached the age of 65, that is, the maximum of $108.50 per month. Mike's wife does not receive a wife's benefit, however, until she is 65, unless to obtain an actuarially reduced benefit at 62.

What Is The Effect of Working After I Am 65

Suppose that a man finds that retirement is, after all, not to his liking and after he has sold his business and moves to Florida, he starts working as a route solicitor for an old friend in the dairy industry whom he meets in Miami. We'll assume that he has not lost the touch, and he earns $5,000 in commissions his first year of working even though he does not give it nearly his full time. Here he is confronted with one of the more controversial points in the Social Security Program—a determination by Congress that a retired worker should not draw old-age benefits while he is still an active member of the labor force. Thus, the law provides that if a beneficiary over 65 and under 72 has earnings in excess of a specified amount, deductions are made from the benefits payable to him.

Specifically, the law provides that a worker may earn from wages or self-employment up to $1,200 a year without losing any Social Security benefits whatever. If he earns more than $1,200 per year he loses one month's benefits for each $80 or fraction thereof in excess of $1,200 that he earns, but a benefit is not lost for any month in which he does not earn at least $80.

No matter how much you earn in a year, you can get the monthly payment for any month in which you neither earn wages of more than $80 nor render substantial services in self-employment.

Thus, if he earned in his employment $5,000 in the year 1957 and

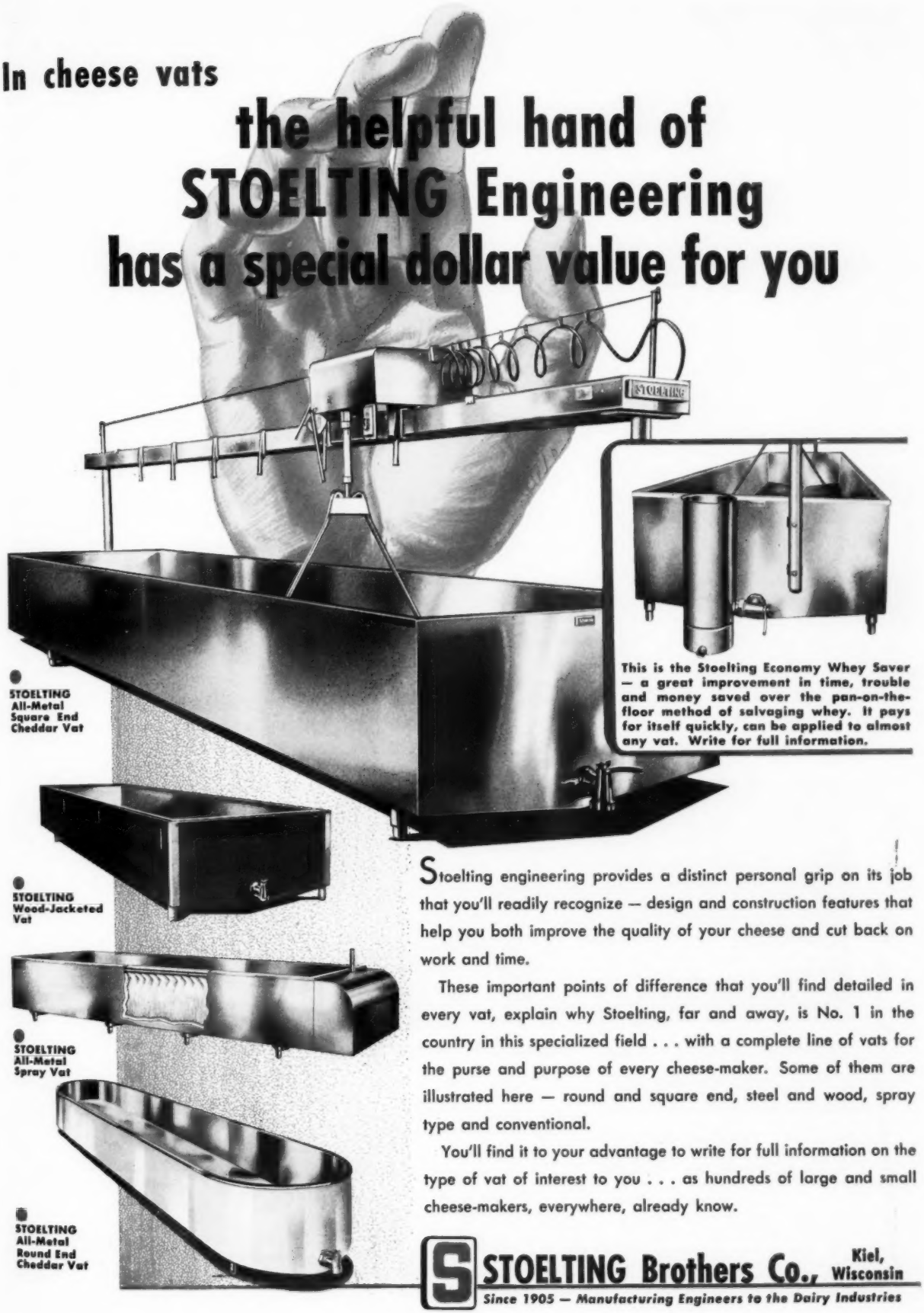
Wait A Minute . . . .

The hardest problem faced by any author writing on a technical subject, such as Social Security, is to keep his material simple, readable, and yet technically correct. In his article in the January issue of The *American Milk Review*, "What Does Social Security Mean to You?" p. 54, the author, Allan J. Parker, an attorney, let one get away from him along this line. In column 3 the second sentence should read "Temporary employees are covered unless their cash wages amount to less than $50 per quarter and their service is not in the regular course of the employer's business. This means that you need not become involved with the troublesome paper work of filling out withholding slips and Social Security records with respect to a man you gave $5.00 to shovel your sidewalk, but you would have to withhold on a fellow you paid $5.00 to help you load your milk truck one morning when the regular man was ill."

Our thanks to an alert Social Security field representative who, although he liked the rest of the article, brought this point to our attention.

In cheese vats

the helpful hand of STOELTING Engineering has a special dollar value for you



STOELTING All-Metal Square End Cheddar Vat

STOELTING Wood-Jacketed Vat

STOELTING All-Metal Spray Vat

STOELTING All-Metal Round End Cheddar Vat

This is the Stoelting Economy Whey Saver — a great improvement in time, trouble and money saved over the pan-on-the-floor method of salvaging whey. It pays for itself quickly, can be applied to almost any vat. Write for full information.

Stoelting engineering provides a distinct personal grip on its job that you'll readily recognize — design and construction features that help you both improve the quality of your cheese and cut back on work and time.

These important points of difference that you'll find detailed in every vat, explain why Stoelting, far and away, is No. 1 in the country in this specialized field . . . with a complete line of vats for the purse and purpose of every cheese-maker. Some of them are illustrated here — round and square end, steel and wood, spray type and conventional.

You'll find it to your advantage to write for full information on the type of vat of interest to you . . . as hundreds of large and small cheese-makers, everywhere, already know.

STOELTING Brothers Co., Kiel, Wisconsin

Since 1905 — Manufacturing Engineers to the Dairy Industries

works every month during the year, he loses one month's benefit for each month he earns in excess of earning $1,200. But since there are obviously only 12 monthly benefits he can lose, in any year his earnings exceed $1,200 by $880 ($80 x 11) plus even one dollar (at fraction of $80) or a total of $2,080, he receives nothing from Social Security that year. Where a worker's benefits are reduced for excess earnings, his wife's benefits are at the same time also reduced or eliminated. However, he continues to pay Social Security taxes on the income he earns, even though this additional income does not increase his benefits, which are already the maximum.

He must file annual reports of his earnings; there is a penalty of loss of an additional month's benefit for unexplained failure to file such a report.

However, there are a few rays of hope. First, the law does not reduce benefits on account of any amount of unearned income he may have from dividends, interest, rent, and so forth. Many millionaires are collecting Social Security checks today. Indeed, it cannot be overemphasized that Social Security payments are not a dole based on need but a legal right. Second, when Joe reaches the age of 72, the ceiling is off his earnings and he may engage in gainful activities to any extent he chooses without reducing his or his wife's Social Security benefits.

To sum up, for most retiring dairymen, however, Social Security provides a floor for financial security in old age; but it is only a complement and never meant to be a substitute for the old-fashioned virtues of thrift, saving, and planning ahead for the future.

●

RESALE PRICE CONTROL

(Continued from Page 34))

publics have, in the past, cried out at the milk industry with great energy. To be tolerated at all, resale price control must be constantly explained and justified to the public. The opponents of the measure state that the cost of this constant interpretation, both in terms of money and energy, are not worth the results to be gained.

Resale Impractical in Practice

In addition, the opponents of resale price control emphasize that the multitude of daily small transactions which characterize the milk business, are themselves a primary reason why the theory of resale price control has no opportunity of working out in practice. If the sales transactions of this industry were greater in size and less frequent in schedule, the opponents concede that the theory of this control might have an opportunity of being enforceable.

Opponents point out, however, that with literally hundreds of thousands of transactions occurring daily by a large number of comparatively small distributors in any given marketing area, the problem of implementing practical enforcement to the theory of minimum resale prices reaches the state of impossibility. To enforce minimum prices, they claim, would require at least an investigatory force so large in size, and so expensive in cost, that the benefits would be overshadowed by the increased consumer price which would be necessitated in order to pay for the enforcement.

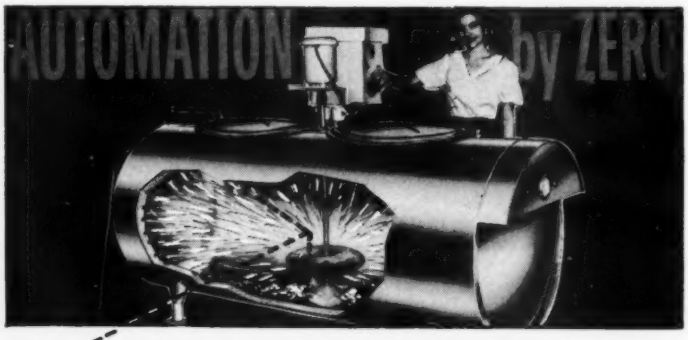
Theory of Resale Refuted

Finally, opponents turn to pure economic theory in the attempt to prove that resale price control, over a period of time, has no opportunity of working. They emphasize that a Federal Milk Marketing Order establishes a uniform base price for all handlers at the producer level, and permits the laws of supply and demand, and competition to take over from that point. They contend that the long range forces of these economic facts will bend, and eventually break, whatever controls happen to stand in opposition to them.

In order to throttle the natural force of the law of supply and demand, opponents point out that three basic controls must be employed simultaneously, each in close harmony and relationship with the other: the control of prices; control of production; and control of consumption, which is consumer demand. Each of the three, price, production, and consumption, exert a profound effect upon the other two. When the price moves, the effect on production and consumption is felt. When production moves, prices and consumption are both affected. When consumer demand and consumption changes materially, the effect on price is strong, and hence affects production also.

Hence, to circumvent successfully the force of the natural law of supply and demand, strong and closely

(Please Turn to Page 86)



TORNADO in Milk Tank CUTS CLEANING Time!

The girl above, with a touch of her fingers, controls a tornado . . . an automatic, *cleansing* tornado in a farm milk tank. Simply turning a control knob starts Zero's Spatter-Spray washing up for you. **This exciting new labor-saver is attracting national attention.**

Exactly the same design features that have always made Zero's round vacuum tank easier to *brush* clean make it possible today to wash *automatically*. It's a logical development of Zero's Super Strainer, direct cow-to-tank hook-up, and other Zero labor-savers.

Mechanically, it's simple. The variable speed motor turns the agitator at low speed during cooling, at a faster speed for butterfat testing. When the tank is empty the agitator spins at top speed . . . to wash, rinse and sanitize.

Zero offers you a tank with a future. Send post card today for complete information.

ZERO Sales Corporation

684-G Duncan Ave., Washington, Mo.

XUM

Just this much KELVAR* is all you use!

Only 1 ounce of Kelvar makes 6 gallons of effective cleaner that prevents milkstone, lowers bacteria counts

Wyandotte KELVAR is a fast-acting, completely balanced dairy-equipment cleaner that gives thorough cleaning action in any water — hard or soft. Highly concentrated, it is economical to use . . . one ounce makes 6 gallons of cleaner.

KELVAR is high sudsing, holds soil in suspension, gives rapid soil penetration and removal — leaves metal and glass surfaces bright, spot-free. And it's easy on the hands!

Call in a skilled Wyandotte representative for a demonstration of KELVAR'S effectiveness, today. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Also Los Nietos, California. Offices in principal cities.*

*REG. U.S. PAT. OFF.

Let a Wyandotte representative help you develop a complete "producer" program, built around Wyandotte's dairy-proved products and time-proved methods for more effective farm sanitation.

Wyandotte CHEMICALS J. B. FORD DIVISION

A basic supplier to the dairy industry for more than half a century

WHO THREW THE COVERALLS IN THE PASTEURIZER ?

or

How Route Analysis Saves the Profit

By ROBERT P. BOWLER

Exclusive feature AMR

$22,000 a year represents a high return for 12 days' work. Yet an actual case history shows how, after an accurate Route Analysis had been developed that took approximately 12 days, it was found possible to eliminate two routes and still deliver approximately the same volume of dairy products as before.

A Route Analysis is the useful instrument available to top management which will sound a monthly alarm when expenses climb. It will indicate which operation or route needs a shot of management penicillin to cure the virus of low profits. A Route Analysis is simply a monthly accounting of all expense, charged directly to the individual routes and balanced against the income. The information is detailed to indicate routes that are making money and the low profit routes. Where a route shows a loss, route analysis pinpoints the reasons and shows where the excess expense exists. Trucks, maintenance, driver-salesmen, plant, and office personnel do not all have the same degree of efficiency. It follows that the profit per route fluctuates according to these variables. Route Analysis not only detects the low profit routes but indicates also where corrective action should be taken.

An accurate Route Analysis removes all guesswork concerning the efficiency of the complete operation. It helps to create harmony between departments by fixing the area of high cost "in the right place." Cost of administration, rent, taxes, insurance, raw products, containers, loading, plant equipment, and plant maintenance divided by the number of quarts produced will determine the unit cost per quart. By multiplying the number of quarts delivered by the unit cost per quart and adding the driver-salesman's wages and the vehicle expense, the total cost for the route is established. The cost of operating the route when compared to the income from the route will indicate the degree of profit or loss. All fringe benefits should be included in the cost of operating a route.

Most distributors of dairy products deliver various products on their routes. These products fluctuate in their processing or production cost. An accurate Route Analysis can be developed to establish the cost of the individual product. By developing a Route Analysis to this fine degree of accuracy, a route truck, delivering two grades of milk, butter, and eggs, will have an exact profit established by product. Information of this nature can be invaluable in planning a sales campaign or in evaluating a completed sales drive for a specialty product.

Many fleet operators use an average to determine route profits. The individual Route Analysis proves the fallacy of using the average as a gauge. For example, if the monthly profit for four routes amounted to $600 and the average was used, the indicated profit per route would be $150. With an individual Route Analysis, an exact profit per route is established. This might show that two routes had a profit of $300 each and two routes did not indicate any profit. This is not an extreme example when you realize that one item, truck costs, will vary as much as $3.50 per day for different plants. The Route Analysis will also prove that greater sales volume is not always the answer to increased profits.

ROBERT P. BOWLER

Member of the Society of Automotive Engineers. Entered the fleet maintenance and delivery fields in 1940 and has been a Transportation Consultant for many industries including the Dairy Industry.

One fleet operator, for example, used the average as a guide for many years with apparently satisfactory results. When an accurate individual Route Analysis was developed, however, it was found possible to eliminate two routes by reshuffling and combining other existing routes. The distant stops were sold. These moves were made after the low-profit routes were studied by the sales department regarding the potential of the territory. Another factor reducing the profits was the high daily mileage involved to serve these distant routes. Obviously a truck operating 100 miles a day costs more in gasoline, tires, and maintenance than a truck operating 25 miles a day. The net result of eliminating two routes amounted to a satisfying $22,000 per year. This was a case of delivering approximately the same volume with fewer routes.

Route Analysis played a key role in another fleet operation when the top salesman, despite a handsome performance, produced a low profit. Bill Jones had an enviable record for increasing his sales volume. But, after the Route Analysis was developed, Bill's route didn't measure up profitwise to his high volume. After a check was made, the low profits were found to be due to high vehicle maintenance costs. Repetitious broken springs, poor gasoline economy, excessive clutch, transmission and brake repairs were causing the low profits. In Bill's haste and determination to increase sales, he did not use proper care in handling his route truck. After these unwarranted expenses were pointed out to Bill and abusive driving eliminated,

XUM

FRESH as the day it was churned!

When you can make that statement you have really won consumer acceptance and you can do this by merely wrapping your butter in West Carrollton Genuine Vegetable Parchment.

Why take a chance with the FRESHNESS of your product by using an inferior wrapper.

West Carrollton Genuine Vegetable Parchment has GREAT WET STRENGTH, GREASE RESISTANCE—it's TASTELESS and ODORLESS. There are no resins in Vegetable Parchment—nothing to impart an off-flavor.

Why not send for samples and full details.

BUTTER WRAPPERS
BUTTER TUB LINERS & CIRCLES
MILK & ICE CREAM CAN TOPS
MEAT WRAPPERS
LARD CARTON LINERS

LINERS FOR MEAT TINS
VEGETABLE SHORTENING CARTON LINERS
TRI-WRAP FOR SMOKED MEATS
SLICED BACON WRAPPERS

FISH FILLET WRAPPERS & INSERTS
CELERY WRAPPERS
CHEESE WRAPPERS
POULTRY WRAPPERS
OLEOMARGARINE WRAPPERS
TAMALE WRAPPERS

BAKERY PAN LINERS
BUTTER BOX LINERS
PARCHMENTIZED KRAFT PLAIN OR PEBBLED
RELEASE PARCHMENT
GREETING CARD PARCHMENT

GLOSS-WRAP for smoked meats (single, double or tri-wrap) • QUILON & DRY WAXED PARCHMENT • AVENIZED • MYCOBAN • CLEAN FOOD PAPER—For Delicatessen and Grocery Stores, also Fish and Meat Markets

WEST CARROLLTON PARCHMENT COMPANY, WEST CARROLLTON, OHIO
SALES OFFICES: New York, 99 Hudson St. • Chicago, 400 W. Madison St.

West Carrollton
GENUINE VEGETABLE
Parchment

the profit showed a healthy increase. Another good instance of how the co-operation of the driver-salesmen pays dividends in reduced costs.

Jack Smith was another victim of high maintenance expense causing a low profit for his route. Jack was a good salesman and careful driver but his vehicle was not designed to carry the heavy load he was delivering. Supplying Jack with a truck engineered to carry the load eliminated the excessive maintenance charges. Route Analysis helped to create a happy atmosphere between the salesman and the maintenance department in this case while increasing the profit.

A Route Analysis which accounts for the total expense by route can be used in many ways to reduce maintenance and delivery expense. When you know your costs, corrective action can be taken. A Route Analysis should be developed monthly. When the necessary information is readily available, it requires about one day's work to develop a monthly route analysis for a medium-size fleet—a small investment to know "How is business?". Economical operation will result when route is measured against route.

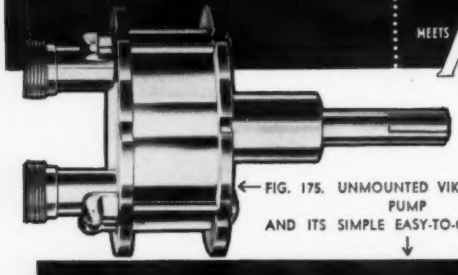
Handy Vacation Schedule Chart

This vacation chart was developed by the North Carolina Dairy Products Association under the direction of Executive Secretary Lloyd Langdon. If you could use one Lloyd might have a few he could spare. Write to the address shown on this reproduction.

VIKING "Sanitor" PUMPS for SANITARY CONSTRUCTION

NO SPLINES OR THREADS in MILK ZONE

MEETS 3A SANITARY STANDARDS



← FIG. 175. UNMOUNTED VIKING "Sanitor" PUMP AND ITS SIMPLE EASY-TO-CLEAN PARTS ↓

With Viking "Sanitor" pumps, you have easy takedown, fast, thorough cleaning (no threads or splines in milk zone to bother). You also have slow speed, fast self-priming, even flow, less weight and one simple O-ring seal.

Four sizes available — 20, 35, 50 and 90 GPM, and 39 models from which to choose.

For complete information, send today for catalog F1.

VIKING PUMP COMPANY

Cedar Falls, Iowa, U.S.A. In Canada, it's "ROTO-KING" pumps

Offices and Distributors in Principal Cities
See Your Classified Telephone Directory

THIS IS NO BULL

WILSTITCH Milk Carton Wire can really help you avoid a lot of problems in your packaging operation.

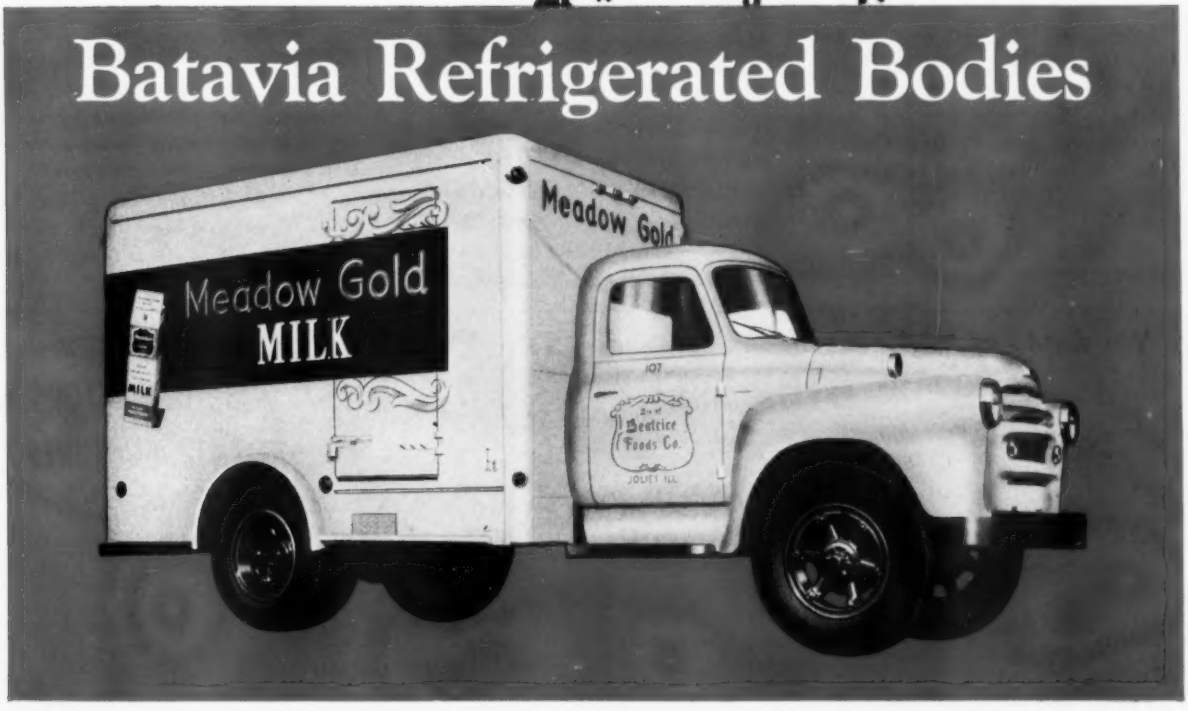
Specify Wilson WILSTITCH

WILSON the mill that service built
Manufacturers of Wire, Nails, Rivets
Telephone LAfayette 3-1221

WILSON STEEL AND WIRE COMPANY
49TH AND SOUTH WESTERN AVENUE • CHICAGO 9, ILLINOIS

The "Cream" of today's society always travels via

Batavia Refrigerated Bodies



Batavia Refrigerated Bodies help your "cream" rise faster and stay on top. That's why so many of the dairy industry's "400" go 100% for Batavia delivery. Batavia Bodies have a wide margin of refrigeration reserve to keep your assets frozen — fresh and wholesome. So follow the lead of the brighter stars along the milky way — go Batavia all the way. Write today for facts.

BATAVIA MONEY-SAVING FEATURES

ELIMINATES ICE COSTS: Saves many hundreds of dollars a year on ice alone.

CUTS PAYROLL COSTS: You operate more efficiently with fewer men because icing time is eliminated, loading can be done anytime and undelivered milk need not be returned to a cooler.

REDUCES MAINTENANCE COSTS: No ice, no water, **no rust.** Batavia lasts longest of all.

BATAVIA BODIES

BATAVIA BODY COMPANY **Batavia, Illinois**

Analysts Favor Dairy Industry for Long-Term Investment

THE DAIRY industry offers solid profit possibilities to the cautious investor, according to "Value Line Investment Survey," published by Arnold Bernhard & Company.

Of the 55 food companies analyzed, only one is designated as "especially underpriced." That one is Foremost Dairies. The companies under study are classified in one of the following ways: "Especially underpriced," "Underpriced," "Fairly priced," "Fully Priced," and "Overpriced."

Three of the other five dairy companies in the study are classified as "Underpriced." They are Borden, Carnation and Pet Milk. The remaining two are in the "Fairly Priced" category. They are Beatrice Foods and National Dairy Products Corporation. Not one dairy company is categorized as "Fully Priced," or "Overpriced."

The "Value Line Investment Survey" paints a rosy picture of the immediate future of the dairy industry. It says, "Last year saw the aggravation of some of the industry's old problems. Major anti-trust action was launched against three companies. The linking of heart disease to the consumption of dairy products was the subject of spirited public debate. Yet, all the companies which have reported for 1956 have shown increased sales and earnings. Composite sales were seven percent higher than in 1955. Earnings were up an average of nine percent. Satisfactory solution of all the problems facing the industry may not be immediately forthcoming. Nevertheless, because of the projected growth of population and consumer income, we look for a continuation of the well-established trend of increasing sales and earnings."

The "Value Line" advises potential investors that fewer cows are producing more milk; that there are more people to drink it; and that per capita consumption has levelled off after years of tobogganing. The large distributors, the report says, continue to capture a greater share of the market—despite FTC action. Profit margins have generally held firm at about five percent.

Looking at the industry as a whole, Value Line finds it generally underpriced with a price-earnings ratio of 10 and an appreciation potential of plus 37 percent.

The reversal of the trend toward lower per capita consumption is attributed to institutional advertising programs carried out by the industry.

The heart-milk fat question has had little or no impact on the sales volume of milk. The issue remains unresolved with claims and counter claims being made by respected authorities on both sides of the question. "It is probable that no final medical opinion will be forthcoming in the near future. The speculation that excess consumption of fats is a contributing factor to heart disease is not of recent origin."

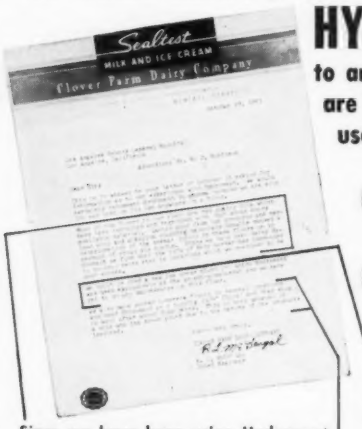
The analysts' opinion is that no lasting threat to the investment quality of the dairy industry is posed by the heart-fat issue.

We would certainly Recommend

HYDROMENT

to anyone because we are sold 100% on its use anywhere in a floor, says

R. L. McDOUGAL
Chief Engineer of
Clover Farm Dairy Company
MEMPHIS, TENN.



In 1948 we built a new ice cream plant in which Hydroment joint filler was used exclusively as the grouting material and we have yet to do any maintenance on this floor.

Since we have been using Hydroment we find that the life of the joints has increased to several years even in locations which we consider to be most severe.

We also have poured concrete floors in several locations and used Hydroment as a topping and they show no wear after about five years. This is very unusual in a milk and ice cream plant due to the nature of the products involved.

THE UPCO COMPANY
4805 LEXINTON AVE. CLEVELAND 3, O.

"HANSEN'S"
DRI-VAC
MIXED STRAIN
MULTIPLE-TYPE
CULTURES

Mixed Strains Assure Vigor and Finest Flavor Development

The wide variety of totally unrelated multiple-type Dri-Vac Cultures assures you of day-in and day-out successful culture propagation. Dri-Vac Cultures enable you to establish a number of different lactic combinations that may be used on an alternate basis to avoid culture failures. Dri-Vac Lactic Culture is ready to go on the first propagation. Simplifies starter making . . . excellent keeping quality for reserve use. Write for details now.

CHR. HANSEN'S LABORATORY, INC.
9015 W. MAPLE STREET MILWAUKEE 14, WIS.

Study Procedures for Interstate Milk Shipments at Conference

THE SIXTH National Conference on Interstate Milk Shipments, held in Memphis, Tenn., attracted 144 registrants, from 29 states and the District of Columbia, who explored further steps to facilitate the program for interstate movement of high quality milk.

Participating were dairy industry personnel from shipping and receiving areas, state departments of health and agriculture, U.S. Public Health Service and the U.S. Department of Agriculture, and from numerous educational institutions.

"The objective of the Conference," a NCIMS spokesman said, "is the development of procedures which will facilitate the interstate shipment of milk and insure the acceptance of high quality milk in any area where needed. By holding national conferences about every two years, we hope to establish mutual confidence on the part of both shipping and receiving areas, and at the same time, furnish the best possible milk supply for all people in every section of the country."

Among the papers presented at the conference was "Status of Use of the Program of Conference Agreements in Interstate Shipments of Milk," by Dr. K. G. Weckel, of the University of Wisconsin, who reported that while many dairy industry people are apparently not aware of the machinery already in existence to facilitate interstate milk shipments, some 697 million pounds of milk were shipped interstate under this program in 1955. This amount may logically be expected to have increased more recently.

A warning that the brucellosis control program is not uniform between areas, and the program of one area is not understood in others, was sounded by W. F. Crighton, General Manager of the Producers Creamery Co., Springfield, Mo., in his paper, "Problems of the Shipper in Interstate Milk Shipments." Further, laboratory tests on milk received at its destination are not always in agreement with tests made at the shipping point. Test results at the point of destination should be surveyed and checked for accuracy as thoroughly as tests made at the shipping point.

The Task Force on Channelling Information called attention to the need for accurate information on the condition of milk arriving in receiving areas, and recommended improved procedures by which such information should be regularly forwarded back to the state of the milk's origin.

The Task Force on Laboratory Certification Procedures suggested that the U.S. Public Health Service provide certification of laboratories in the receiving areas, when and if requested. USPHS was also requested to hold periodic training courses for

(Please Turn to Page 115)

The Answer to Your Summer Cooling Needs is . . .

TRADE FRICK MARK

SHELL-ICE

Write today for this new Bulletin on Shell-Icers.

Shell-Ice Maker in operation at Dean's Dairy, Cleveland—shown before equipment was housed-in.

Dairies everywhere are finding Shell-Ice more effective and more economical for use on milk routes.

Because Shell-Ice has no waste, no snow, no slush. It's all cold, solid ice, in curved pieces that promote prompt cooling.

Shell-Ice is frozen on the *outside* of stainless-steel tubes, using full-automatic controls. Made economically, without labor, using direct-expansion ammonia.

Connect a Frick Shell-Icer now to your refrigerating system and be ready for the hottest weather.

Get the full facts and figures today from your nearest Frick Branch or Distributor.

FRICK COMPANY • WAYNESBORO, PENNA.

RESALE PRICE CONTROL

(Continued from Page 78)

integrated controls over all three must be employed. Weaken any one of the three, and like a three-legged stool, the whole program is likely to fall and result in chaos.

Because opponents feel that controls as far reaching as those which would be necessary to completely circumvent the law of supply and demand are both unnecessary and too costly under our existing business system, they state that resale price control is not feasible either from a theoretical or a practical viewpoint.

Conclusion

The consideration of resale price control as a companion measure to Federal Milk Marketing Orders is studded with theoretical and practical arguments, most of which are striving to reach a similar objective. That objective is almost invariably a more orderly and stable market in which the industry can transact its business.

For the most part, both opponents and proponents of resale price control fight for their cause in the belief that the cause which they advocate will result in bringing a greater quantity of higher quality milk to the public; returning to the producer the highest possible return for his milk; offering to the consumer the lowest possible average price consistent with good and sound management practice; and presenting the processor and distributor with the opportunity of conducting his business in a more orderly and profitable manner.

In analyzing the problem of resale price control as a companion measure to Federal Milk Marketing Orders, it is probably well to remember that during the past two decades in America, a new social theory has taken root in American business. That theory is *protection*. During this period, protection has either emerged or been strengthened for farmers with strong cooperatives and with government support, buying, and storage programs. Protection for labor has shown tremendous growth with new minimum wage laws, hours of employment legislation, unemployment insurance, social security, etc. Protection for the money of individuals has been assured with the birth and growth of the Federal Deposit Insurance Corporation. Protection for investors has been attempted with the development of the Securities Exchange Commission. And today, cries are being made in Congress for greater protection for the small businessman.

This is a relatively new theory and development for American business. There are those who vigorously oppose this theory, and there are those who enthusiastically support it. But good or bad, it is a business philosophy which is apparently spreading over the American business scene.

The growth of this theory of protection may have a bearing on the application of resale price control for the fluid milk industry. The government, the industry, and apparently the consuming public have already accepted both the theory and practice of protecting the minimum price of milk for the farmer. Recognizing that milk, as a commodity and as an industry, possesses vastly different problems than other products or industries, the question still remains whether or not this theory of protec-

Kow-Slip BOTTLE COVERS

Beat the Sun...

Kow-Slip
BOTTLE COVER
(YOUR NAME OR LOGO HERE)
GRADE A
MILK
This insulator is placed here to protect this fine product from sunshine to insure its high quality, flavor and vitamin content for you.

and Save You Money!

These inexpensive kraft insulators are designed specifically to protect your milk from the vitamin-destroying rays of the sun—keeps milk 50% cooler without the use of expensive metal insulated boxes.

Kow-Slip® Bottle Covers may be placed over the bottles at the discretion of your route salesmen.

Keep a package in every milk truck to hold and insure good customer relationship!

- No Vitamin Deficiency
- Fresh Flavor Always
- 50% Cooler Milk
- Satisfied Customers
- Save Thousands of Dollars Each Year!

Sizes to fit Gallons, ½ Gallons and quarts

Send Now for Prices and Complete Information

• *Your Company Name Is Imprinted Free of Charge*

T & H SPECIALTIES

707 SANGAMON ST. • CHICAGO HEIGHTS, ILL.

tion, which has gained acceptance in many avenues of our business community, should now be extended for the protection of the processing and distributing end of the fluid milk industry.

In the final analysis, the ultimate decision will undoubtedly be made by the American political public as they decide whether or not this philosophy of protection shall be encouraged and expanded by government for greater areas of our business community.

●

TRUCK TALK

(Continued from Page 60)

gear to keep the engine in its operating range to get the performance you desire.

Now to determine how fast a truck will go you have to use the following formula.

$$\text{MPH equals } \frac{(\text{RPM})\ (r)}{(168)\ (R)}$$

In this case:

RPM is engine speed in revolutions per minute.

r is the rolling radius of the tire—this is in every tire handbook.

168 is a constant and don't fool with it.

R is the rear axle ratio multiplied by the transmission ratio if you are figuring speed in anything besides direct drive.

Thus an example would be:

$$\frac{(2{,}100)\ (21.0)}{(168)\ (6)} \text{ equals } 43.75 \text{ MPH}$$

This would be a normal speed in high gear since the value of 6 used in the gear ratio indicates a rear axle reduction but no reduction of an intermediate gear in the transmission.

In using these formulae, you are not attempting to design a truck. You are merely attempting to arrive at the right combination of units to give you the type of truck you need. For instance you need a certain size tire to give you capacity for the load. That tire has a given rolling radius and there is nothing you can do about it. So your rolling radius is more or less a fixed value.

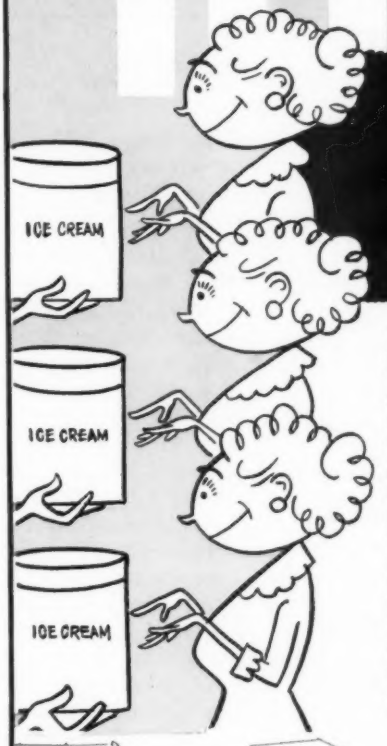
The engines available have known characteristics such as speed in revolutions per minute. The trick then is to take advantage of such variables as gear ratios to get the desired result.

Here's a Lesson in Profits . . . Secure Profits!

THREE OUT OF TEN BUY . . . .

HOME DELIVERED ICE CREAM

That's the Report of One Dairy Equipped with Kari Kold



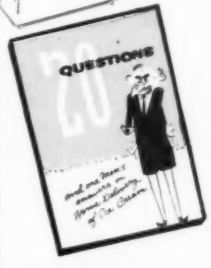
Wouldn't you like to add 10% to the sales volume of every route? Wouldn't you like to sell twice as many half-gallons of ice cream as pints?

Your milk routes, each one, can produce a sales volume equal to four typical wholesale ice cream stops! It's being done—and you can do it, too! Kari-Kold will show you how!

Do you want proof? There's a complete and factual booklet showing how one dairy does it. It's a story covering most all the questions any management has in making a major decision on increasing sales volume and profits.

MAKE SURE IT'S A Kari Kold MECHANICAL REFRIGERATION UNIT

There's a model designed especially for your trucks.



GET THIS INFORMATIVE BOOKLET TODAY!

It's yours—FREE—courtesy of Kari-Kold . . .

Kari Kold

219 Scribner Ave., N.W. • Grand Rapids 4, Mich.

DARNELL
CASTERS AND WHEELS

Always SWIVEL and ROLL

Check These Greater Dollar Saving Features

RUBBER TREADS . . . a wide choice of treads suited to all types of floors, including Darnelloprene oil, water and chemical-resistant treads.

RUST-PROOFED . . . by zinc plating. Darnell Casters give longer, care-free life

LUBRICATION . . . all swivel and wheel bearings are factory packed with a high quality grease that "stands up" under attack by heat and water.

STRING GUARDS . . . Even though string and ravelings may wind around the hub, these string guards insure easy rolling at all times.

Any way you look at it
you get more value per dollar

It's New

Your free copy is waiting
Send for it today!

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

A Strike Against One Is a Strike Against All

Paul Potter's Dairy Labor Reports says that employers in a bargaining group can shut down all their plants if one of their number has been struck by the union in the course of collective bargaining. The U. S. Supreme Court has ruled, in effect, that a strike against one is a strike against all. It was an eight to nothing decision in the Supreme Court and allows firms in a bargaining group to "furlough" employees and close plants until a strike is settled.

PRICE WARS

(Continued from Page 42)

COST is not only hitting below the belt, but it's a stepping-stone toward a situation which will backfire so that no one will profit.

The writer witnessed the following incident in a Super Market some time ago. A certain dairy had convinced the store manager that he should handle their milk in addition to the two brands he already had. For clarity, we shall label this in-coming dairy as Dairy X, and the other two Y and Z. The store manager had emphasized to Dairy X that he would not be a party to price-cutting but he would allow Dairy X to give away, merely as an introductory offer, an eight-ounce carton of cottage cheese with each ½ gallon of homo on the first Saturday their milk appeared in the dairy case. So, the distributor for Dairy X placed a sign over the dairy case: "An eight-ounce Cottage Cheese *FREE* with purchase of a one-half gallon X milk—one limit per customer."

When the distributor for Dairy Y came in that Saturday morning to serve the store, he improvised a sign on the spot and placed it over the section reserved for Y's milk: "A 16-ounce Cottage Cheese *FREE* with a one-half gallon Y milk—one limit."

Then came distributor for Dairy Z. He called his company from the store and then proceeded to put up a sign over Z's milk: "Carton of Cottage Cheese (eight-ounce) *FREE* with *EVERY PURCHASE OF* one-half gallon of Z milk. *No limit.*" Whereupon, Dairy Y's man came back and changed his sign to *"no limit"* on the 16-ounce cheese he offered.

That day, the store manager told me he gave away a combined total of over 1000 cartons of cottage cheese. Many customers, at that, did not take all the cheese they were entitled to remarking that they couldn't eat it that fast.

Not only did dairies X, Y, and Z all lose money that day, but they sold practically no cottage cheese the following week in that store because most of the customers were well supplied gratis.

Now this incident is by no means an isolated case. Some are much more extreme than the one cited. But the point is: how ridiculous it all is! Had dairies Y and Z recognized the right of dairy X to sell milk in that store with the manager's consent, the folly would not have resulted. Dairy X would have had its give-away of an eight-ounce package of cheese, one limit, as an introductory offer that one Saturday and by Monday morning the offer would have been over, the prices of the three milks would have been the same and each could have sold milk and cheese strictly on the merit and quality of their product. They could have spent the money they gave away in a fair, competitive promotional advertising campaign to induce the customers to pick up their respective brands. And at least, all three would have *LIVED* in that store. But as it turned out, the flare-up rubbed furs the wrong way and a price war ensued despite the store manager's reluctance to have one. At last report, all three milks are selling at ridiculously low prices in that store.

Certainly, there'll always be trouble spots. Flare-ups will crop into the picture occasionally. That will happen anywhere *PEOPLE* compete. But if the guy who is prone to be quick on the trigger would only reflect before firing, it is more than probable that much of the trouble would never start. Not to be naive, but I should like to conclude with an old Confucius saying: "Man who points gun must expect to be shot at!"

CLOSED CIRCUIT TELEVISION

(Continued from Page 38)

tion is easily grasped. The value of visual communication is more subtle and less easily understood.

Perhaps the true virtue of industrial television, outside of the obvious practical uses such as record control, is in the nature of supervision itself. Good leadership is composed of many things. One of the most important is a knowledge of what is going on. Sometimes we speak of it "as a finger on the pulse" or "knowing the score". What it really means is that the supervisor has developed a system of communication that enables him to keep informed on what is taking place. The closed circuit television system simply improves upon existing methods of "keeping informed".

The men in the plant who work in view of the television cameras were somewhat dubious at first. The natural inclination was to see them as devices for spying. Very wisely, management at Page's took the time to explain the system to employees, had them operate the controls, talk over the voice the cameras, take them for what they system, and in general become accustomed to the equipment. When it first went into effect there was a natural tendency to clown a little, to

wave a hand at the camera, "Look, ma I'm on television". This quickly wore off as one might expect it would where normal human beings engaged in an honest exchange of ideas. The men in the milk storage room, understanding the purpose of are; a management tool that isn't going to make their job more difficult and may make it better. For the most part they don't think much of anything about it.

For a small plant where most of the work of handling and processing milk takes place in one room or a closely related area, industrial television offers little. For larger plants, especially older plants where addition has been piled on addition, a closed circuit TV installation might prove to be of considerable value. They are expensive. The Page equipment cost in the neighborhood of $10,000. On the other hand we have seen plans on the drawing board where industrial television has been combined with automation to create a plant of medium size that can be operated by three men.

While we must reiterate our feeling that the effective use of industrial television is very much in the exploratory stage we also believe that it is a tool which holds brilliant promise. In every sense of the word the Page Dairy Company is pioneering in a new and exciting field.

Super-Stitch
STITCHING WIRE
TAILOR MADE FOR
Pure-Pak
EX-CELL-O CORP. DETROIT, MICH.
YOUR PERSONAL MILK CONTAINER

Buy the best....from the specialist in Stitching Wire. Manufactured to exact specifications for your Excello machine. See for yourself.
WRITE TODAY FOR FREE SAMPLE

Also distributed by THE EX-CELL-O CORP., Detroit, Mich.

10257 TORRENCE AVENUE • CHICAGO 17
BRANCH OFFICES: NEW YORK, N. Y. • BOSTON, MASS. • COLUMBUS, OHIO
ST. LOUIS, MO. • SAN FRANCISCO, CALIF. • ATLANTA, GA.

CHICAGO Super-Stitch STEEL & WIRE CO.

From the State Capitols

By BETHUNE JONES

- **Delaware Looks At Price Control**
- **Virginia Considers One Man Commission**
- **Minnesota Bans Unfair Practices**

MID-STATES®

bookbinders wire for Pure-Pak containers

Quality stitching wire manufactured to exact specifications. Wrapped on metal throw-away spools for ease of handling . . . used without coil holder . . . fast feeding without binding or tangling. Sizes: 20 gauge through 23 gauge. Finishes: Galvanized, liquor or tinned.

MS SW MID-STATES STEEL & WIRE COMPANY

Crawfordsville, Indiana • Jacksonville, Florida

NEW JERSEY:

Milk Pricing Order Is Revised

Following receipt of petitions from southern New Jersey dairymen that they were threatened with a loss of their market, Director Floyd R. Hoffman of the New Jersey Office of Milk Industry rescinded an order on pricing of farm bulk tank milk.

The director rescinded the portion of his April 1 milk order making dealers liable for the cost of hauling milk from the farm to receiving plants. These costs were estimated at 15 to 20 cents a hundredweight.

Hoffman said the provision was protested by a number of southern New Jersey dealers who threatened to shift to out-of-state sources of supply. As a result, OMI suspended the bulk tank provision, he declared.

The original ruling that the dealer assumes title of ownership to farm bulk tank milk "once it is measured, sampled and removed from the producer's holding tank" still stands, Hoffman said.

●

CALIFORNIA:

Manufactured Milk No Longer Price Yardstick for Fluid

A bill eliminating the mandatory use of the price of manufacturing milk as a yardstick in establishing minimum prices for fluid milk under the state milk control law was given final passage by the California legislature and sent to the governor for signature.

Milk producer groups backing the measure said the price of manufacturing milk, for such purposes as the production of cheese, ice cream, custards and other products, no longer was a reasonable guide for determining what the price of fluid milk should be. They contended its mandatory use discriminated against dairy farmers.

●

DELAWARE:

Wholesale, Retail Price Control Bill Proposed

Regulation of wholesale and retail milk prices was proposed by a bill introduced in the Delaware legislature by Senators E. M. Tull, Seaford Democrat; A. J. Cook, Kenton Democrat, and J. A. Correll, Newarl Republican.

The measure would direct the Stat Board of Agriculture to establish marketing areas and fix the minimum

wholesale and retail price of different grades of milk within them.

It would provide for appointment by the board of a director of milk control, who would preside at public hearings required before any marketing or price order could be issued by the board. The director would serve a two-year term at an annual salary of $10,000.

Under the bill, price orders would be pegged to reflect costs of production and distribution, the price and supply of feeds, and "other conditions in the milk industry, including the amount necessary to give a reasonable return to the producer and dealer."

●

VERMONT:

Legislature Kills Bill to Print Butterfat Content on Ice Cream

A bill which would have required the butterfat content of ice cream to be printed on containers was defeated by the Vermont Senate after having earlier been approved by the House.

Fear was expressed by the Senate agriculture committee that women would not buy ice cream if they were made aware of its butterfat content every time they picked up a package.

As originally drafted, the bill would have increased the minimum amount of butterfat in straight ice cream from 10 to 14 percent and in ice cream fancied up with nuts and fruits from eight to 12 percent. This was abandoned, however, after it was brought out at a public hearing that there is a greater demand for ice cream with a smaller amount of butterfat than for a product with a larger amount.

●

VIRGINIA:

One-Man Commission Urged

Creation of a new one-man State Milk Commission to replace the present three-member price-fixing agency was suggested at a hearing conducted in Roanoke by a Virginia state legislative interim committee studying the state's milk control laws to determine what, if any, changes should be made.

The suggestion came from the present commission's chairman, V. P. Randolph Jr. of Gloucester, who emphasized he would not be the slightest bit interested in being the single commissioner if such were established.

MINNESOTA:

New Laws Ban Unfair Trade Practices

Bills enacted by the Minnesota legislature included a measure designed to eliminate unfair competition and resultant price wars in the sale and distribution of milk, frozen foods and ice cream.

The new act prohibits "under-the-counter" rebates, stops various types of "giveaways" and makes it illegal for any manufacturer, distributor or wholesaler to own, control or have more than five percent interest in any retail business.

It also makes it unlawful for a wholesaler or distributor to provide, directly or indirectly, any outdoor signs or fixtures or to extend long-term or so-called "cheap credit" to retailers.

To finance administrative costs, the measure provides for a levy of one-quarter cent per hundredweight on milk and one-tenth of a cent per gallon on frozen dairy foods.

to save it...

CLEAN VACUUM PANS WITH SOLVAY FLAKE ACE ALKALI

Speed your cleaning operations and you'll save money—good reason to specify SOLVAY Flake Ace Alkali! Its exclusive combination of ingredients speeds the removal of milk proteins and fat, even under extreme hard water conditions. SOLVAY Flake Ace Alkali produces premium results at a practical price. To obtain details of the use of Flake Ace for cleaning pans, evaporators or other milk condensing equipment, write for SOLVAY Service Bulletin No. 2-54. It's yours without cost.

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL & DYE CORPORATION
61 Broadway, New York 6, N. Y.

BRANCH SALES OFFICES
Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit • Houston
New Orleans • New York • Philadelphia • Pittsburgh • St. Louis • Syracuse

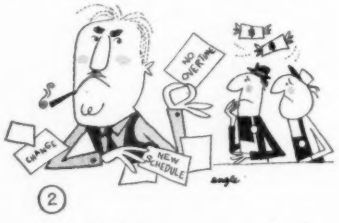
SOLVAY

RIGHT or WRONG in Labor Relations

Can You Change a Worker's Regular Schedule So that a Job He's Always Done on Overtime is Now Done at Straight Time?
What Happened:

One chore had to be done while the production workers weren't at their machines. For 20 years, two workers had put in one hour's overtime for four days a month to take care of that chore. Then the company decided to cut down on labor costs. So, the two men were told they should do that job by coming in an hour before the regular shift and leaving an hour early; or by moving their lunch hour up or back an hour; or by coming in an hour later and staying an hour later. In any event, they were to do the chore without putting in more than eight hours a day. No more overtime. The two men objected, claiming:

1. The company has no right to put us on a different schedule for four days a month just to avoid paying overtime. We're entitled to a uniform work schedule throughout the month.
2. Our regular schedule calls for us to work the same hours as everybody else and do that chore on overtime—and the company has no right to make a change without consulting the union.
3. In any event, the company



(2)

shouldn't deprive us of a benefit we've enjoyed for 20 years.

The company countered:

1. The contract merely says that overtime must be paid for more than eight hours a day or 40 hours a week. It does not establish shift schedules.
2. We have the right to establish shift schedules and vary them within reason without consulting the union.
3. Anyhow, the matter was discussed with the union and the men, and they were given a choice as to how their schedules were to be varied.
4. There are other workers who work off-shift hours and get straight-time pay up to eight hours a day.

Was The Company:

RIGHT ☐ **WRONG** ☐

What an Arbitration Board ruled: "The recognition clause does seem to contain a special mandate to the company to meet with the union with respect to bargainable matters, including hours of employment, but it does not suggest that the meeting must result in agreement before the company can act, in such a circumstance as is presented by this case, where some overtime for two employees was to be eliminated. This contract simply calls for time and one-half to be paid for hours worked in excess of eight in any one day or 40 in any one week.

On this basis these two employees were paid a premium rate when they worked overtime. When the company changed their schedule to include not more than eight hours' work in any one day, the requirement for premium pay was removed. The past practice of the company in this matter has not conferred an inalienable right to overtime on these employees. As long as the company schedules work and pays for it within the framework of the contract's requirements, it has satisfied its responsibilities under that contract." Grievance denied.

When Can't You Fire an Employee for Reporting to Work Drunk?
What Happened:

When Jim Benson turned up for work Christmas Eve morning, the guard at the gate thought he'd "had

NOW! the most
CONVENIENT HALF GALLON
NO extra labor – NO staples

- Make maximum use of your present equipment
- Put consumer appeal on your product in the dairy case
- Use Automatic TWIN PAK for Canco, Pure Pak or Sealking

Handles and bands for 1000 Half Gallons only $2.95
Write to: EDLO INC., 191 Eighth Street, San Francisco 3, Calif.

a few." When Jim punched in, his foreman was sure of it. There was alcohol on his breath, his eyes were bloodshot, his speech was slurred and he weaved when he walked. All in all, the foreman didn't think Jim was fit for work that day. He didn't make

a big production of it—just told Jim to go home. Jim went. When he returned to work on schedule three days later, he was told that he had been fired as of Christmas Eve for reporting to work drunk.

Jim insisted his firing was unjustified:

1. I hadn't been drinking. I'd taken some medicine for a cold, that's all. And my eyes are always bloodshot because of an accident I had a few years ago.
2. The foreman should have told me right then that he thought I was drunk and that he was going to hand out a penalty. Not three days later, when I don't remember who I met on the way out who could be a witness that I was cold sober.
3. I'm 55, and I've been with the company for 12 years. At my age, getting "canned" is pretty darned serious, and it shouldn't be done to me without more proof.

   Usually, if they think a man is drunk, they send him to Personnel, so other people can see if he is drunk, not just the foreman.

The foreman didn't see it that way at all:

1. The guard at the gate thought Benson was drunk, too. Neither of us was born yesterday. We've had plenty of experience with drunk workers, and we know when a man is drunk and when he isn't.
2. Benson had been warned for drinking before. He'd also had a five-day layoff for reporting out sick when all the time he was lapping it up in a tavern. There wasn't any need to spell it out for him this time.
3. The Personnel office was closed that day, so I couldn't send Benson there.

Was The Foreman:

RIGHT ☐ **WRONG** ☐

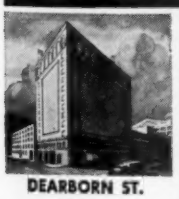
What Arbitrator Carl Warns ruled: "Mr. Benson should have been told at the time he was sent home that he was indefinitely suspended because of intoxication, or that he was discharged. Union officials in the plant as well as other management personnel should have been notified in order that the degree of proof customarily obtained be available to support the serious charge. Of course, in those cases where an employee is obviously drunk, inarticulate, and abusive, a full hearing prior to leaving the plant is not expected. The evidence does not reveal that the grievant was in that condition. Under the necessity for substantiation of the serious charge, Mr. Benson's *prior* layoff, although worthy of consideration, is not sufficient to justify his termination of employment. He shall be reinstated without back pay but with full seniority rights."

SO. WATER MARKET PLANT

FOR THE BEST STORAGE OF YOUR DAIRY PRODUCTS AND THE ULTIMATE IN SERVICE

CENTRAL COLD STORAGE CO.

BLUE ISLAND PLANT


DEARBORN ST. PLANT

Phone: SUperior 7-5548
350 N. Dearborn
Chicago 10, Ill.

CLARK STREET PLANT

HAYNES SNAP-TITE GASKETS

"FORM-FIT" WIDE FLANGE HUGS STANDARD BEVEL SEAT FITTINGS
MOLDED TO PRECISION STANDARDS
DURABLE GLOSSY SURFACE
DESIGNED TO SNAP INTO FITTINGS

LOW COST...RE-USABLE
LEAK-PREVENTING
NEOPRENE GASKET for Sanitary Fittings

Check these SNAP-TITE Advantages

Tight joints, no leaks, no shrinkage
Sanitary, unaffected by heat or fats
Non-porous, no seams or crevices
Odorless, polished surfaces, easily cleaned
Withstand sterilization
Time-saving, easy to assemble
Self-centering
No sticking to fittings
Eliminate line blocks
Help overcome line vibrations
Long life, use over and over

Available for 1", 1½", 2", 2½" and 3" fittings.
Packed 100 to the box. Order through your dairy supply house.

THE HAYNES MANUFACTURING CO.
709 Woodland Avenue · Cleveland 15, Ohio

METERS HELP IN PLANT

(Continued from Page 36)

being unable to distinguish between air and product. Any one of a number of things such as air, sand or grit in the product, the inevitable wear on a machine that has been in operation over a period of time, can cause a variation in the amount of milk delivered by a pump. A flow meter enables the operator to know the amount of milk in pounds per hour that is being fed into the lines and equipment.

A flow meter can be installed at any point in a vertical part of a pipeline between a pump and a specific piece of equipment. A device with the trade name of Flow-Meter manufactured by the Sharples Corporation is being used at Hi-Lo Dairy. It consists of a top and bottom fitting, top and bottom clamp, top and bottom "O" ring, a stainless steel shield, a plexiglass tube and a two pound stainless steel float, tapered at the bottom and having projecting a shoulder. The shoulder is the only part visible when the meter is in operation.

The glass metering tube has a smaller diameter at the bottom than at the top. The movement of the float through this tube is based on a physical principle called dynamic balance. Dynamic balance is the weight of the float minus the weight of the fluid it displaces pressing downward and the pressure due to fluid velocity pressing upward. When these two forces equal each other, the float remains suspended in one place in the metering tube. Dynamic balance is achieved.

If one pump is used to feed three different machines simultaneously, each with a different rated capacity, the flow to each can be regulated by installation of a Flow-Meter and a valve. *(See illustration)* If only one Flow-Meter is available in a plant, it can be moved from one apparatus to another. This is accomplished by saving the 19½ inches of pipe removed from the line to accommodate the meter, equipping it with clamps on either end and replacing the meter when it is needed some place else.

Another reason for saving the pipe is that it can be used in the event of damage to the measuring tube.

The meter is so constructed that the more pressure there is, the better the sealing will be. The "O" ring acts as a cushion between the metal of the pipe and the glass metering tube.

No claims have been made that the meter can be cleaned in place. Several sanitarians have approved it for CIP. The meter is useful in a CIP system, however, as an indicator of solution velocity, ordinarily about 5 feet a second for 1½" and 2" pipe (12,000 pounds an hour in 1½" pipe, 21,400 pounds an hour in 2" pipe.) These capacities are shown with red arrows on the scale.

The measuring scale is set up for milk and is 98% accurate. This accuracy is maintained, unaffected by either temperature or butterfat from milk containing zero to 10 percent fat.

Hi-Lo Dairy processes about 2000 gallons of milk a day. It can be classified as a medium sized plant. The significance of the meter device in this plant seems to us to be twofold. First it is a clear demonstration of the fact that accurate measurement of flow is a valuable production tool for the smaller plants as well as for the large ones. Secondly, the meters are not, because of price, something reserved for large volume operations. This tends to bear out our contention that when it comes to efficiency of plant operation a medium size plant with a reasonable volume can compete effectively where plant efficiency is concerned with the larger plants.

●

50 YEARS A SALESMAN

(Continued from Page 25)

man's business," Mr. Allen declares "but it should be directed toward helping the customer." For example, I used to suggest that the storekeeper put a plate of cheese on the counter so that customers could sample it. My customers moved a lot of cheese with that simple merchandising device. Another thing I've noticed over the years is the fact that a woman won't take a product from a shelf that is understocked. If there are three or four packages of butter of one brand beside a substantial stack of another brand she'll go for the big pile every time. They are inclined to think that the few packages left are the residue from a supply that has been pretty well picked over, consequently they fill their needs from what appears to be a fresh supply. Well, I call this to the attention of the storekeeper. Sometimes I fill up the case mystelf if it happens to be my brand that is low. In any event I try to help him do a better job of selling. It helps him and it helps me. That is one of the ways I built up confidence. But this business of the giveaways isn't service, it's a kind of piracy that often works to the direct disadvantage of the customer. I've seen cabinets go into little stores as an incentive to handle a particular brand that are two or three

Strahman AUTOMATIC WATER-SAVER SPRAY NOZZLE

The Strahman Spray Nozzle does a better job with the least amount of water. This precision made nozzle enables the operator to get any type stream of water to do his job by simply pressing the lever. A soft spray is sent forth with slight pressure on the lever, and a strong straight stream may be had by pushing the lever all the way down. This convenient control of the wash water assures better cleaning with a lot less effort. The nozzle automatically shuts off the moment the lever is released, thereby eliminating all waste of water.

IDEAL FOR THE FOOD INDUSTRY

RENEWABLE RUBBER COVER. **The sturdy cover protects the nozzle and your equipment against knocks and dents. When the cover becomes worn, replace it with a new one.**

CONSULT YOUR DEALER

STRAHMAN VALVES, INC., 16 HUDSON STREET, NEW YORK 13, U. S. A.

times as big as the store will ever need. They take up a lot of space that the storekeeper could use for some other product that would sell if he didn't have to tuck it away somewhere out of sight in order to make room for the oversized equipment. Then there's the question of paying for it. Somebody, somewhere has got to pay. One of the things that happens is the elimination of the profit margin. That leads directly to a temptation to reduce the quality in order to make a profit. So you end up by persuading a storekeeper to give up expensive floor space for something he doesn't need and providing him with an inferior product that in the long run will alienate his customers.

Refrigerated cabinets, display cases, signs, are all excellent merchandising tools that a storekeeper needs. It's a salesman's job to help his customer get what he needs. The point is that when you start using them as bait for a stop, when you entice him into getting something bigger than he needs then you are no longer helping him, you are, in fact, betraying him and betraying the industry. In the long run it can only lead to trouble."

I asked Mr. Allen what he thought of the sales training programs we hear so much about today. I thought his reply might be a little tart. After all what is there to teach a man who

has travelled the salesman's circuit for five decades. "Oh, they're very good," he replied. "Very good. We had an excellent series of lectures at Yale a little while back that I attended. I got a great deal out of it. That, too, is part of a salesman's job. He has to keep on learning, keep on studying. The sales material that is put out today is a big help. I try to supplement it by studying my job when I'm on the road. I watch my customers and I watch their customers. It's surprising how much there is to learn. There doesn't seem to be any end to it. I guess we keep on learning all our lives although sometimes we may not know it."

Fifty years is a long time to be on the road. Just the fact that many years of continuous service is an achievement. But along with that achievement Mr. Allen has accumulated a great deal of knowledge and wisdom about the business of selling. Of the two we think the wisdom is the more important. Industry, integrity, confidence, quality, they are generalities that are easy to shrug off in favor of the hard sell and get-in-there-and-pitch-men. Yet, when all the non-essentials are stripped away those four are the dominant elements in a brilliant sales experience that embraces half a hundred years. If you've got quality in your product and in your people you don't need to worry about the hard sell. As Mr. Allen says, "You can't begin to sell until you have the confidence of your customer." Quality is the place where confidence begins.

SUPERIOR
Standard
Open Pail
Hooded Pail
Seamless and Solderless
FOR LONGER LIFE AND EASIER CLEANING
Superior dairy-barn tested and approved milk pails, strainers and standard cans make milk handling easier. They are made to stand up under hardest everyday dairy use and the glass-smooth finish assures greatest possible sanitation. Heavily welded Superior construction provides long service life.
JOHN WOOD COMPANY
Superior Metalware Division
St. Paul, Minn.
JOHN WOOD
Milk House
Utility Pail
Baffle
Cup Strainer
St. Paul
Standard Milk Can
WIRE CRATES for paper and glass bottles
DISPENSER CANS • MILK CANS
ICE CREAM CANS • HARDENING BASKETS
HOODED and OPEN PAILS • STRAINERS
Metalware for the Dairy Industry and Waste Receptacles

White Metal Fittings May Be the Cause of

Oxidized Flavor Development in Milk

By EDMUND LUSAS

RECENT STUDIES CONDUCTED AT Iowa State College indicate that sufficient copper to cause oxidized flavor development may be dissolved by milk passing through just a few white metal fittings in an otherwise completely stainless steel processing system (5).

As reviewed by Brown and Thurston (1) and Greenbank (3), over the years, research workers have established that certain metals, especially copper, can catalyze the development of oxidized flavor in dairy products, including market milk. The dairy industry has fairly completely abandoned the use of copper containing metals in equipment where they would come in contact with milk during processing. This has been true for sheet copper, tinned-copper, and for the most part, true for the white metals, the majority of which contain approximately sixty-five percent copper. However, due to the difficulty of fabrication of stainless steel and the resultant high costs of some fittings, it has not been uncommon for dairy plants to retain a few white metal fittings and valves in otherwise completely stainless steel processing systems. Although the amount of copper-containing white metal in a plant may be limited to a few pieces, enough copper may be dissolved by milk passing through them to cause oxidized flavor development in the processed product.

Although many plants have almost completely replaced copper-containing equipment with stainless steel equipment, development of oxidized flavor in milk has still remained a year around problem in some areas. Some of the reasons for this may have arisen due to the vast changes in milk handling methods which have occurred in the past decade and a half. The period of holding milk between production and consumption has increased with: improvements in refrigeration, every other day or three times a week delivery, six or five day a week milk processing schedules, and also with the advent of every other day farm bulk tank pick up. Thus milk has a longer period in which to develop oxidized flavors. The trend towards better bacteriological quality of milk has reduced the "antioxidative" effects of bacteria that are found in high count milks. The use of concentrated cleaning solutions at high temperatures by clean-in-place methods, by greatly increasing the rate of corrosion and appearance of "brassiness" on white metal fittings in stainless steel systems, has resulted in an increase in the amount of copper surface exposed to milk.

The objectives of the studies reported were to determine the amounts of metals which might be dissolved from a milk processing system and their effects on oxidized flavor. The studies were made at the college

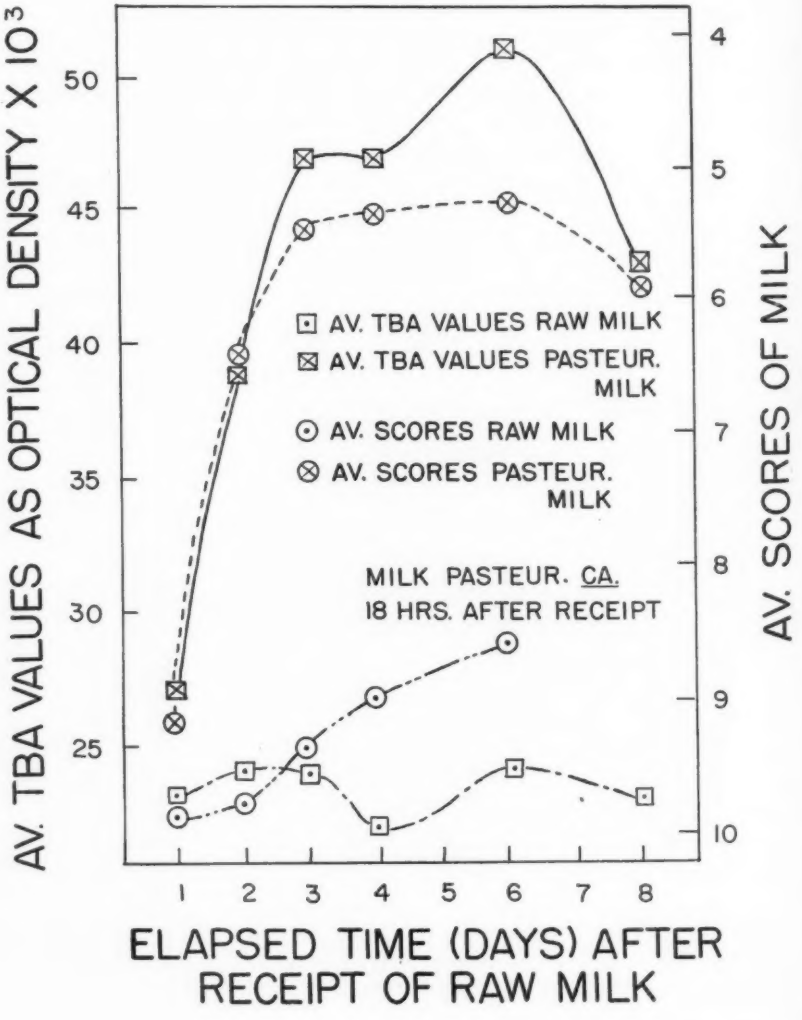


Fig. 1—Average flavor scores and thiobarbituric acid (TBA) values of common raw and pasteurized milks during an eight-day storage period.

dairy plant which was experiencing difficulty with oxidized flavor development the year around. The copper-containing items were a tinned-copper homogenizer blow-out disc and the following white metal items: three plug-type valves, one adapter, one plug, two nipples, and a homogenizer valve outlet fitting. The system contained much less white metal than is often found in a plant of this size and was not altered in any way from that used in the normal operation of the plant. All of the copper-containing fittings were located in the part

Mr. Edmund Lusas, the author of this article, has been doing graduate work at Iowa State College on a DISA Fellowship. A member of the University of Connecticut judging team in 1953, Mr. Lusas was awarded the No. 2 fellowship as a result of his team's showing. His investigation of a possible relationship between white metal and oxidized flavor was carried on as a part of his graduate work.

of the processing system between the raw milk cold storage tanks and the bottle and can fillers; this part of the system was cleaned by recirculation methods, and some of the white metal fittings showed "brassiness."

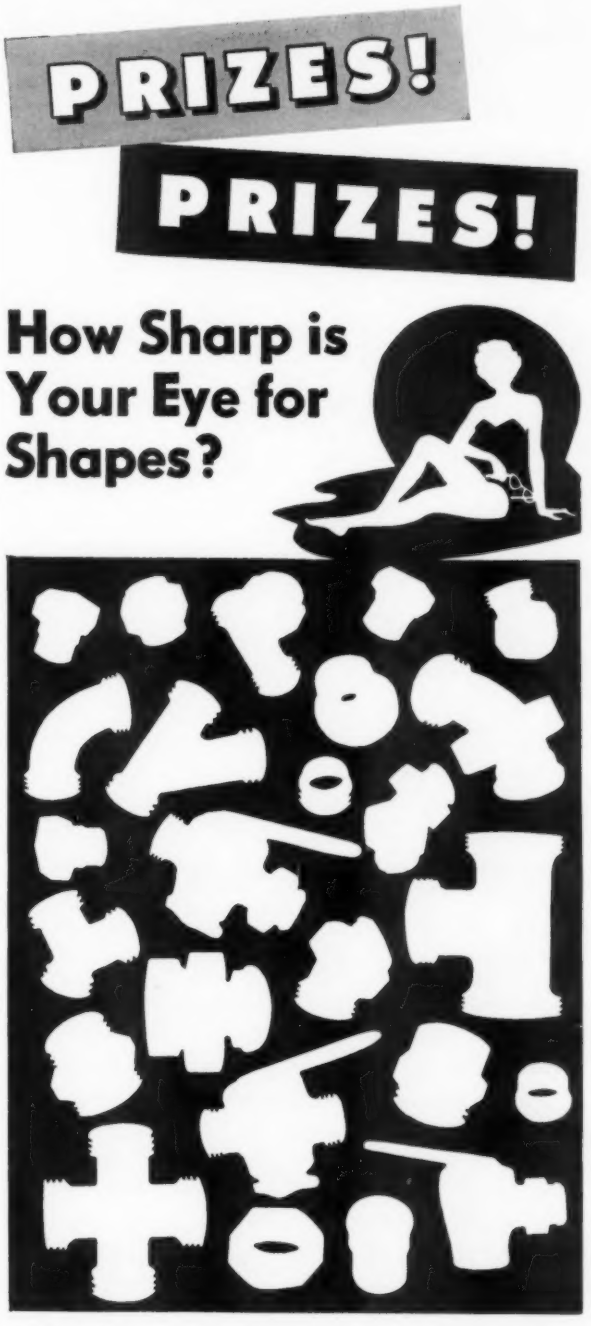
The studies were conducted on cream line milk which was allowed to pass through the homogenizer without pressure being applied. The milk was received in cans and was pasteurized by high-temperature short-time methods. Milk was cold at all times when it came in contact with the white metal fittings.

Analyses of representative mixed samples of the raw milk and of the first thirty gallons through the processing system showed that the increases in the iron and nickel contents of milk were negligible. The increases in the copper content of milk during processing for the study period are illustrated in Table 1. The copper content of milk that passed through the system showed an increase of nearly one-tenth of a part per million. The ability of this amount of added copper to bring about the development of oxidized flavor has been demonstrated by Krukovsky and Guthrie (4).

Table 1. Copper content of milk before and after it passed through a system containing white metal fittings and stainless steel sanitary tubing.

	Parts per million of copper:[2]	
Date:[1]	Raw milk:	Pasteurized milk:[3]
4-5-55	0.042	0.165
4-12-55	0.041	0.130
4-19-55	0.022	0.138
4-26-55	0.030	0.167
5-3-55	0.030	0.084
5-10-55	0.044	0.150
5-17-55	0.040	0.092
5-24-55	0.033	0.118
5-31-55	0.040	0.147
6-7-55	0.032	0.113
Av.	0.035	0.130

[1]Date milk received.
[2]Each value the average of triplicate determinations.
[3]Composite of first 30 gal. of milk through lines; pasteur-



These white silhouettes are all standard A-P-C Fittings from the A-P-C Catalog. Write in the unit number (28A, 10C — etc.) that you think identifies each. Clip the advertisement and send to Alloy Products Corp. The first 25 most nearly correct answers that arrive from readers of each magazine in which this advertisement appears — will be awarded a beautiful and ingenious, gleaming electro-polished, stainless steel set of 4 popular coaster-ash tray combinations. You'll be proud of them in your home. It's easy and it's fun! But be among the first 25 to win — so hurry!

ALLOY PRODUCTS CORP.
1065 PERKINS AVENUE • WAUKESHA, WISCONSIN

Here's your FORBES chocolate

HAVE YOU TRIED FORBES CHOCOLATE?

Thousands of youngsters have . . . and keep coming back for more. They know the difference between an ordinary chocolate milk and one made with Forbes. Chocolate is a traditional flavor favorite with children (and grownups, too).

A good chocolate like Forbes will increase your milk sales. So take advantage of this active extra market by capitalizing on the more than 50 years Forbes has devoted to the production of superior chocolate products — 30 years serving the dairy industry. Start right now by writing for further information and a sample of Forbes Chocolate Flavor Powder. You'll like it!

Forbes The BENJAMIN P. FORBES CO.
2000 WEST 14th ST. • CLEVELAND 13, OHIO

ization procedure: 163 ± 1°F., 16 sec., ca. 18 hr. after receipt.

The score card for the evaluation of oxidized flavor development used the following numerical values for designation of the degree of defect: 10, no oxidized flavor; 9, flat; 8, cardboard or cappy; 7, slightly oxidized; 6, definitely oxidized; 5, strongly oxidized; 4, metallic; 3, strongly metallic; 2, slightly tallowy; and 1, strongly tallowy. The judging panel consisted of three experienced dairy products judges. As is shown by the plots of the average daily flavor scores for the study period in Fig. 1, the processed milk samples developed strong oxidized flavors within two to three days, while the raw milk samples showed little tendency towards the development of oxidized flavor. Scores for the evaluation of oxidized flavor development in the raw milks could not be determined after the sixth day of storage due to the onset of microbial spoilage flavors. In some instances, the judging panel could detect the onset of oxidized flavor development in the processed samples as a "flat" flavor at only seven hours after processing. Samples of the milks pasteurized in all stainless steel equipment by the low-temperature long-time method did not show any significant change in copper or iron content, and showed no tendency towards the development of oxidized flavor. The studies were carried out over a ten week period between the middle of March and the beginning of June, so as to study the effects on milk produced on dry feeding and also on pasture feeding regimes. The milk produced on all pasture feed developed oxidized flavor after passing through the processing system, although to a somewhat slower rate than did the milk produced on all dry feed.

Tests Show Close Agreement

The studies provided an excellent opportunity for the gathering of more information on the agreement between panel judging and the 2-thiobarbituric acid test for oxidized flavor development. The previous evaluations of this test had been mostly done in conjunction with the development of test procedures and with milks to which copper salts had been added intentionally. These studies provided an opportunity for evaluating the test with milks in which oxidized flavors developed as a result of standard factory procedures. The 2-thiobarbituric acid test procedure used was that developed by Dunkley and Jennings (2). Graphs of the average daily results for the 2-thiobarbituric acid test and the judge's flavor evaluation scores, as presented in Fig. 1, show that rather close agreements were found. and that use of the 2-thiobarbituric acid test as a means of evaluating oxidized flavor development seems promising.

The results obtained in these studies indicate that white metal fittings in stainless steel processing systems are a potential source of copper contamination and possibly the ultimate cause of oxidized flavor development in some milk. Therefore, the advisability of the use of white metal fittings is questionable. This conclusion appears applicable to other dairy products as well. A tendency exists for the increase in the copper content to be highest in the first milk passing through the system with successively smaller amounts of copper

being dissolved in later milks. However, if the first milk pasteurized in a plant is bottled directly without the dilution of later milks that would occur if a large bottler surge tank was used, it is conceivable that a plant might experience the rapid development of oxidized flavor in the first milk bottled, but not in later milks. This might result in spotty customer complaints which might be hard to explain, and cannot be afforded by any plant. Another timely instance where the advisability of the use of white metal fittings could be questioned is in installations in farm bulk tanks and in farm bulk pick up trucks where the pressure for initial low cost may eventually require replacement of the fittings with those of stainless steel and thus would result in large long range ineconomies.

The studies reported in this article were conducted in the Dairy Industry Section of the Iowa Agricultural Experiment Station, Ames, Iowa. Appreciation is expressed to the Dairy Industries Supply Association under whose fellowship this work was done, and also to the Dairy Industry Department, Iowa State College, for the facilities made available for this project and for the guidance rendered by its staff members.

REFERENCES

(1) Brown, W. C. and Thurston, L. M. A Review of Oxidation in Milk and Milk Products as Related to Flavor. *J. Dairy Sci.*, 23: 629-685. 1940.

(2) Dunkley, W. L. and Jennings, W. G. A Procedure for Application of the Thiobarbituric Acid Test to Milk. *J. Dairy Sci.*, 34: 1064-1069. 1951.

(3) Greenbank, G. R. The Oxidized Flavor in Milk and Dairy Products: a Review. *J. Dairy Sci.*, 31: 913-933. 1948.

(4) Krukovsky, V. N. and Guthrie, E. S. Ascorbic Acid Oxidation a Key Factor in the Inhibition or Promotion of the Tallowy Flavor in Milk. *J. Dairy Sci.*, 23; 565-579. 1945.

(5) Lusas, E. W., Bird, E. W. and Rosenberger, W. S. The Possibility of Copper-Inducted Oxidation of Milk in Stainless Steel-White Metal Systems. *J. Dairy Sci.*, 39: 1487-1499. 1956.

Dairy leaders at recent eighth annual meeting of New England Dairy and Food Council, Boston, Massachusetts, were (left to right) Richard D. Aplin, Federal Milk Market Administrator, Boston; Dr. Zoe Anderson, nutrition research director, National Dairy Council, Chicago; W. P. Davis, president, New England Dairy and Food Council, Boston; B. Lucille Bridges, executive director, New England Dairy and Food Council, Boston; and William B. McKinney, eastern regional representative, National Dairy Council, New York.

Grade A Milk HTST Pasteurization

(Below) 40% CREAM Pasteurization

(Below) COOLING ICE CREAM MIX

Choose a VERSATILE KUSEL Zig-Zag Flo

It's the PLATE that makes the BIG DIFFERENCE!

Exclusive KUSEL design assures proper milk distribution in a smooth rippling action—no hot spots—no cold spots. Criss-cross contact prevents plate buckling by distributing take-up pressure equally. NO LOOSE GASKETS — every other plate gasketed both sides. Unusually high heat transfer for efficient day-in, day-out production. EASY to CLEAN.

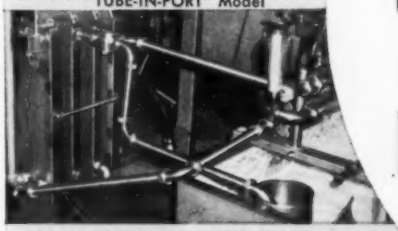
Completely DESIGNED, ENGINEERED and MANUFACTURED by

KUSEL DAIRY EQUIPMENT CO.

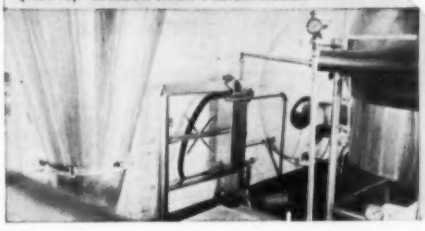
Dept. A • Watertown, Wisconsin

Write for name of NEAREST DISTRIBUTOR

(Above) Cooling Pasteurized Milk "TUBE-IN-PORT" Model



(Above) CHEESE MILK Pasteurization



HEATING MILK for DRYER

PLATE UNIT to do it BEST

POWERED FOR ACTION!

KLENZADE

SANITIZERS

Cost-Control Bactericides for Every Job

KLENZADE X-4
For General Bactericidal Use in Plants — On Farms

Liquid Sodium Hypochlorite

KLENZADE XY-12
For Large Users, and Water Chlorination

Quaternaries

KLENZADE STER-BAC
Ideal for Use in Both Hard and Soft Water Areas

Iodine Sanitizer-Detergent

KLENZADE IODOPHOR
High-Powered Germicide With Vigorous Detergency

KLENZADE PRODUCTS, INC.
"All Over America"
BELOIT, WISCONSIN

MIF HEAD SEES MARKETING AS ANSWER TO SURPLUS PROBLEM

THE SOLUTION to the nation's "surplus" milk problem lies in marketing our abundance rather than in limiting our production, declared C. Raymond Brock of New Haven, Conn., president of the Milk Industry Foundation coming out against proposals to place quotas upon the amounts of milk that dairy farmers may be allowed to produce. He pointed out that our present excess of milk production over milk consumption would be eliminated if each person in the United States could be encouraged to increase his milk use by only two ounces per day, on the average.

"Like some other foods, the U. S. production of milk has, in recent years, exceeded the nation's consumption of milk and dairy products," he said. "Thus, we are said to have over-production of milk. Consequently, we have heard in recent months of proposals for limiting production, for placing quotas on the amounts of milk that farmers may be allowed to produce; just as quotas have been placed upon tobacco, wheat, and cotton.

"But, I say to you, the solution of the problems does not lie in artificial limitation of production; nor in having the government raise prices to artificially high levels, at the taxpayers' expense.

Efficient Production, Better Marketing

"The solution lies, instead, in encouraging the efficient dairy farmers to do an even more efficient job of producing milk at the lowest possible cost, but with a reasonable return for their investment in land, buildings, equipment and labor. And the second part of the solution lies in marketing this abundance, rather than in curtailing the supply. For the sad fact is, despite America's prosperity and unprecedented level of living, one-fourth to one-third of our people still have inadequate diets. And the deficiencies in their diets can be made up, to a large extent, by a greater consumption of milk and dairy products.

"To the end of marketing our whole milk supply, rather than having government buy up the so-called surplus in the form of powder, cheese or butter, America's fluid milk dealers spend more than $60 millions a year for advertising and promotion. The manufacturers of other dairy products spend many millions more, and the dairy farmers contribute additional millions for promotion.

"In toto, some $200 millions a year, or more, are being spent to market our abundance of milk. In recent years, we have seen signs of success—per capita consumption of milk and most other dairy products has been growing. We are now at a point where the per capita daily surplus is only about two ounces. In other words, if we could get the average American to drink only two ounces more milk per day than he is now using, our so-called surplus would be eliminated. And still the average consumption of milk and dairy products would not be up to the level recommended by nutritionists."

TOURING THE TRADE

MILK CAN NOW BE SOLD IN GALLON JUG IN NEW YORK

There is no question of the legality of the gallon jug in New York now that Governor Averell Harriman has signed a bill which passed both houses of the legislature. He declined to sign a similar one last year, declaring at the time such a law was unnecessary there being no restrictive statutes against the gallon jug.

To remove any doubt, Gov. Harriman this year affixed his signature to the bill which was originated by Assemblyman Orin S. Wilcox and Senator Henry A. Wise, both of St. Lawrence County, a large milk-producing area.

J. Thomas Cribbs, president of the Eastern Milk Producers' Cooperative, in urging the governor to sign the proposed law, said, "Eastern believes use of gallon containers will stimulate fluid sales to the benefit of dairy farmers while providing consumers with an opportunity to purchase milk at a lower cost and in quantities most convenient to them.

The governor signed the bill April 29.

●

DAIRY FARMERS BELIEVE IN AND ACT ON SALES PROMOTION

Dairy farmers' interest in sales promotion to increase consumption of dairy foods has been increasing.

They are investing their money in a nation-wide program of research, advertising, merchandising and public relations aimed exclusively at convincing the nation's consumers they should use more milk, butter, cheese, ice cream, evaporated milk, and nonfat dry milk.

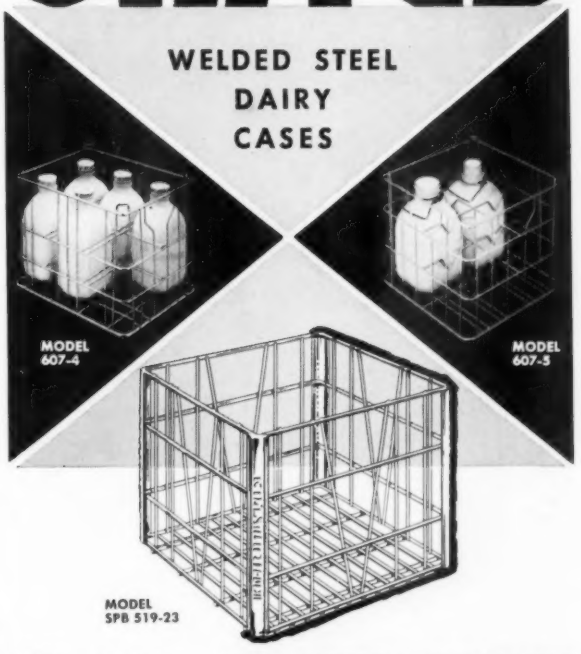
The American Dairy Association released at its annual meeting in Chicago a report on a survey of what dairy farmers really think about the dairy industry and how economic conditions of dairymen might be improved. The study was made late last summer by National Analysts, Inc., of Philadelphia, for the association.

The survey covered a representative cross-section of dairy farmers throughout the country who sell 50 pounds or more of milk each day, and produced these conclusions about the attitudes of dairymen:

Seventy-eight percent of all dairymen selling 50 pounds of milk or more per day feel that they personally have responsibility to try to convince consumers to use more dairy foods, and 87 percent stated that advertising and sales promotion are important helps in increasing the sale of dairy foods.

Most of the dairymen feel that they must work together as a group to do a selling job for their products, and over half of all the dairy farmers put this belief into action by investing funds in the American Dairy Association. In some areas of the country dairy farmer

UNITED



FOR SAFE — SURE BOTTLE HANDLING

Glass or Paper

UNITED, Originator of the welded steel dairy case, offers the most complete quality line in the industry. Millions of these durable long-lasting cases are in use today and are proving themselves virtually "wearout-proof".

UNITED Cases give maximum protection to either glass or paper bottles, and a good variety of models are available to meet your exact needs. For cleanliness, convenience, compactness, and long, low-cost service, UNITED Cases cannot be surpassed. In any refrigerated truck program, United Cases are a must for glass or paper.

UNITED Cases are manufactured of strong steel wire, electrically welded at every wire intersection for greatest possible strength. Cases are heavily plated with "Duraseal", an exclusive United process that is satin smooth, rust resistant and long wearing.

UNITED Model SPB 519-23, shown above, is equipped with full-length corner posts to give paper containers maximum protection, and as a plus feature, your name can be embossed on these posts for permanent identification. This case operates smoothly through automatic stacking and filling machines. Will not "ride up" on conveyor lines. Model 607-4 carries six half-gallon oblong glass bottles and Model 607-5 handles four one-gallon square glass bottles.

For full information on the United line, write for a complete catalog. A United man is near you and will be pleased to tell you more about United products.

UNITED STEEL AND WIRE CO.

137 Fonda St., Battle Creek, Michigan
Branch Plant: Wilkes-Barre, Pennsylvania

AT LAST!

a continuous truck refrigeration system

SPECIFICALLY DESIGNED for RETAIL MILK DELIVERY

the NEW **KOLD-TRUX®**

LANCE

Completely new and specifically designed for retail milk delivery. The new Kold-Trux LANCE answers a long-felt need for a continuous refrigeration system that really works on today's retail milk trucks.

NO PAYLOAD SPACE used

The Lance takes no usable payload space, is conveniently mounted where it will not interfere with the delivery of milk. Lightweight and compact, it solves your space problems.

TROUBLE FREE operation

The Kold-Trux Lance has the same mechanical drive that has proven so trouble free on the Kold-Trux Mark system. Field tests, too, have demonstrated its unusual dependability and low-cost operation.

TRANTER MFG., INC. — 25 YEARS — KOLD-HOLD DIVISION

KOLD-HOLD® division Tranter Mfg., inc.

210 E. Hazel St., LANSING 9, MICHIGAN

participation in the association program is as high as 75 percent of all the dairymen.

While 72 percent of the dairymen investing in the association's program believe it is successful, the survey shows that among those dairymen who are not participating, about one-half say the association's program is successful. When asked why they are not investing their money, 77 percent of the non-members gave as their reason the simple statement they had never been given the opportunity to participate.

This lack of opportunity to invest arises out of the fact that the investment, or set-aside, is handled for the American Dairy Association by the dairy plant or other agency which purchases the milk from the farmer. The buyer makes the decision whether or not the dairy farmers will be given the opportunity to decide to invest in the association's sales promotion program.

So far as the future is concerned, 28 percent of the dairymen expect improvement in the dairy industry in the next few years, while 22 percent say they expect conditions to remain about the same, 31 percent are uncertain, and 19 percent expect conditions to be worse.

The theme, "Quality Milk for Your Family," was emblazoned on the unique float entered by High's Dairy Products Corp. of Washington, D. C., in the 30th annual Cherry Blossom Festival parade, held in the nation's capital. One of the scores of floats entered by Washington business firms, associations and civic groups, the dairy's entry featured High's copyrighted family of four, representing High's milk jug customers. Additionally, High's dairy float carried a cornucopia overflowing with High's jug milk, ice cream and other products, a live dairy cow, and a huge replica of the firm's gallon milk jug. Currently in its 24th year, High's recently marked the second anniversary of the introduction of High's gallon jug milk in the Washington area, neighboring Maryland communities and northern Virginia.

RECORD 2,000 ATTEND 72nd ANNUAL HOLSTEIN-FRIESIAN CONFERENCE

The 72nd Annual Convention of the Holstein-Friesian Association of America, which concluded June 5 after a two-day conclave in Indianapolis drew a record number of delegates and a record number of spectators. Of the 2,000 members and guests attending, 179 were delegates, representing the more than 47,000 Holstein-Friesian members, the world's largest dairy cattle registry organization.

Reflecting the broad international scope of the

Registered Holstein industry, the Honorable Galo Plaza of Quito, Ecuador, was the keynote speaker at the convention. Mr. Plaza, a Holstein breeder, is a former president of Ecuador and served as that country's ambassador to the United States. He has also represented his country at the United Nations.

Also prominent among the speakers was M. H. Fohrman, former head of the breeding, feeding and management section of USDA's Dairy Husbandry Research Branch. His subject: "30 Years of Breeding Research with Holstein-Friesian cattle at Beltsville, Md."

•

SUPERMARKETS GROW AND GROW AND GROW

Beside the visual evidence of quick-blossoming and hardy supermarkets the following statistics can give little comfort to the owner of the small grocery store:

In 1952 supermarkets numbered 16,540.

In 1956 supermarkets numbered 27,000.

In 1952 supermarkets' share of total grocery store sales was 43.8 percent.

In 1956 supermarkets' share of total grocery store sales was 62 percent.

•

PLUCKS FOUR CHILDREN FROM FIERY DEATH, WINS PASTEUR GOLD MEDAL

Nine milk company employees were presented with Pasteur Awards in local ceremonies for acts of heroism and life-saving service during 1956, it was announced by the Milk Industry Foundation, sponsor of the awards. Included in the awards were six medals—one gold, one silver, four bronze—and three certificates of honorable mention.

The Pasteur Awards were established in 1937 and have been given each year to milk company employees who have distinguished themselves through acts of great courage or through other outstanding humanitarian services.

Winners were chosen from 21 contenders, proposed by their employers in the United States, Hawaii, and Canada. The medal winners were selected by a panel of eminent judges under the chairmanship of Ben Grant, president, National Press Club.

Of the nine award winners, one is a route supervisor, one is a truck driver and seven are route salesmen.

The gold medal went to route supervisor, David McMickle of Kinnett Dairies, Inc., Columbus, Georgia. McMickle braved the roaring flames and blinding smoke in a dry, wooden house three times to rescue four children trapped inside. The last one he pulled out by her hair just as the structure collapsed.

The silver medal went to George Hoy, Jr., of Half Hollow Farms, Inc., Wyandanch, Long Island, New York, for diving into water 15 feet deep to rescue a woman who had just driven her car into the canal. He smashed a front window, after finding the car, dragged

KOLD-HOLD®

hold-over plates

SAVE on ice and labor

Eutectic-filled Kold-Hold Hold-Over plates bring you substantial savings by eliminating the cost of making and handling wet ice, and save plant space and maintenance of ice-making machinery.

SAVE on down-grading of milk

More complete and more uniform product protection keeps milk sweet and salable longer, saves losses from marginal refrigeration.

EXTRA cooler room—less handling

Direct loading from bottling station to truck saves cooler room, double handling. Unloading and reloading of returns are eliminated, too.

SAVE damage to trucks, cases, milk

Eliminating wet ice moisture saves rust and rotting of metal and wooden cases and truck body parts. Prevents excessive carton handling that causes "leakers."

Analyzing your needs

The variety of truck plates plus the wide, wide range of mechanical refrigeration systems permits Kold-Hold to provide you truck refrigeration tailored to your needs. Make Kold-Hold your headquarters for truck refrigeration.

KOLD-HOLD® division **Tranter Mfg., inc.**

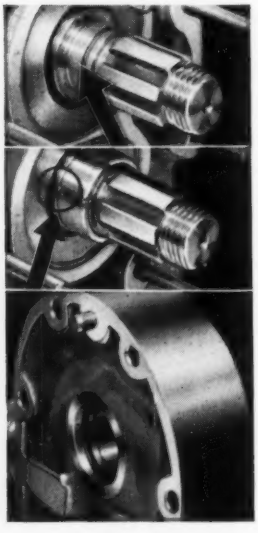
210 E. Hazel St., LANSING 9, MICHIGAN

new

THE MOST PERFECT SEAL FOR YOUR PRODUCT IN WAUKESHA P. D.* SANITARY PUMPS

New Waukesha Sanitary Pump with Vented Cover.

No product leakage . . . no intake of air with the new Twin O-Rings in WAUKESHA PUMPS. Sealing is engineered to handle vacuums up to 27 inches of mercury; pressures up to 150 PSI.



Here's How The O-Twins Work

Picture at left shows one O-Ring fitted to the shaft. Known as the shaft sleeve seal rubber, it not only seals but provides exact positioning of the impellers. Next picture shows the stainless steel sleeve which fits on shaft *over* the O-Ring. Arrow points to pin which fits a slot in the sleeve so that sleeve and shaft *must* rotate together. No galling, no seizing, no misalignment, no shaft wear! And no leakage!

Where's the Other Twin?

It's located in the pump body as the 3rd picture shows. When cover and pump body are together, the stainless steel shaft sleeve rotates *inside* this ring. Again, no shaft wear at this point. The sleeve is reversible — doubles its life.

But these are only three of the features in the NEW WAUKESHA PUMP — there are 18 in all — to make your choice of WAUKESHA more profitable with far less maintenance and far longer service-life, get in touch with your WAUKESHA distributor.

Here's WAUKESHA'S 1957 Catalog to tell you the whole story of WAUKESHA Pumps. Tell us what product you handle. Send a postcard today.

*Positive Displacement

Waukesha FOUNDRY COMPANY

Dept. D-7, Waukesha, Wisconsin

the woman from her seat and brought her safely to shore. Hoy suffered severe cuts on his forearms.

The four bronze medals were: Arthur H. Hunter of the Fraser Valley Milk Producers Association, Vancouver, B. C., Canada; Sol Blum, Foremost Golden State Dairy, San Francisco, California; Eldoran Deats, the Carnation Company, Phoenix, Arizona; and Pat Grandinetti, the Borden Company, Miami, Florida.

Honorable Mention certificates went to Irving Walman, Dairymen's League, New York, New York; Joseph Shostak, Dairymen's League, Middletown, New York; and J. H. "Rusty" Gray, Beatrice Foods Company, Mission Creameries Division, Watsonville, California.

●

ASSOCIATION OBJECTS TO PROPOSAL TO RAISE MANUFACTURED MILK PRICES

The Wisconsin Creameries Association takes exception to the newly-formed National Dairymen's Association's urging before Congress a higher price for manufacturing milk than is now in effect. The figure recommended for Class II milk was $5.29 in Wisconsin with a Class I premium of $1.00 and a differential of $1.75 between New York and Chicago. The price of Class I milk in New York would be $8.04 per hundredweight.

Wisconsin Creameries Association says that while Class I milk used for bottle purposes has no substitute, particularly among the young, manufacturing milk has a terrific substitute and "we can only guess what would happen to our market and to our butterfat if under all present circumstances manufacturing milk were raised to this price. It isn't that producers should not have that much. They deserve it and earn it but the big question of economics is there. Can we meet the competition with that milk? Probably not, under present circumstances in the vegetable oil industry."

●

BORDEN FOUNDATION HAS MADE 1,344 SCHOLARSHIP AWARDS

The Borden Company Foundation reports that 1,344 college and university students have received scholarship awards from the Foundation during the past 13 years. This is reported in a new Borden Company Foundation Directory which, for the first time, lists all the college and university scholarship awards and prizes sponsored by the foundation.

One hundred seventy-six such awards are made annually and are administered by 113 different colleges and universities in 38 states.

Based on academic attainment, the awards go, for the most part, to seniors who stand highest in their class for the first three years of college work. These students receive $300 each. Eligible fields of study for these awards are agriculture, home economics, journalism, pharmacy and veterinary medicine.

There are also $200 awards at 31 schools for the freshman student who has attained the highest average marks in his class for the first year of college work. The freshman awards, begun on an experimental basis

in 1956, seek to recognize at the very beginning of the college career the importance of good scholarship.

In the field of medicine, 26 schools administer $500 awards given at graduation time to the senior student whose research as an undergraduate has been deemed to be the most meritorious in his class.

In all instances the colleges select the award students and administer the grants.

It AIN'T HAY

Top salaries in the dairy business last year went to officials of the two largest dairy corporations in the country, Borden and National Dairy Products Corporation.

Here's the line-up:

	1956	1955
Borden:		
T. G. Montague, chmn. ..	$123,000	$132,420
H. W. Comfort, pres. ..	$101,950	$ 91,900
R. D. Wooster, v.p.	$ 76,200	$ 75,100
National Dairy Products Corporation:		
E. E. Stewart, pres.	$186,820	$183,247
L. A. van Bomel, chmn. ..	$ 77,508	$ 89,160
G. C. Pound, v.p. and president of Kraft Foods Co.	$142,839	$111,360
Total:	$708,317	$683,187

Note that the total income of the top men from their respective companies in 1956 exceeded their income in 1955. This was true despite the fact that some individuals made less in 1956 than in 1955.

SCHOOLS FOR BULK MILK HAULERS

Two schools for haulers engaged in handling bulk tank milk have been held recently, one at the University of Illinois and one at the University of Connecticut. The Illinois school was a one day meeting while the Connecticut project consisted of three separate meetings held in various parts of the State.

The Illinois school was held in order to enable haulers to obtain a license to sample and grade milk which is required by Illinois law. The license is issued by the State Department of Agriculture only after an applicant has attended a training school.

The Connecticut school was aimed at acquainting drivers with the flavor defects that they are most likely to encounter. Although no formal license requirement was involved the general purpose was much the same as that which was pursued in Illinois.

The Illinois school is sponsored jointly by the Illinois Department of Public Health, the Illinois Department of Agriculture, and the University Department of Food Technology. The Connecticut meetings were under the direction of the University's Department of Dairy Manufacturing.

You Get MOST For The LEAST in
DOERING PATTY-PRINT MACHINES

MORE { PRODUCTION - ACCURATE WEIGHTS
SHARPLY SEPARATED PATS - SANITARY - DURABLE
LESS { LABOR - OPERATING COST
MAINTENANCE EXPENSE

PATTY-PRINT installation at Mountain States Creamery, Los Angeles
MADE IN 2 SIZES - CAPACITIES 400 and 1,200 POUNDS PER HOUR

C. DOERING & SON, Inc.
1375 W. Lake Street - CHICAGO 7, ILLINOIS

DOERING
PATTY-PRINT and BUTTER-PRINT EQUIPMENT

Low Cost Jug Handles
for store and retail bottles

HAYNES "Thrifty Handles"
With Stainless Steel Clips

EASILY AND QUICKLY ATTACHED.
TAKES ONLY A FEW SECONDS.
NO TOOLS NEEDED.

FOR ALL HALF-GALLON AND GALLON SIZE JUGS

Many Outstanding Features

PACKED IN CARTONS CONTAINING 1000 HANDLES.
WHEN ORDERING SPECIFY MODEL, SIZE & FINISH OF JUG.

ATTRACTIVE • STURDY • CONVENIENT

- CLIP HALVES MADE OF Stainless Steel LONG LIFE. NO RUSTING. HANDLE IN BRIGHT ZINC FINISH.
- HOLDS SECURELY - CANNOT BE PULLED OFF
- JUGS WITH "Thrifty Handles" CAN BE MACHINE WASHED, FILLED & CAPPED.
- AVAILABLE FOR EVERY STYLE & FINISH OF GALLON & HALF-GALLON BOTTLES.

HAYNES BOTTLE LUG
THE HAYNES BOTTLE LUG POSITIONS HANDLE PREVENTS TURNING OR SWINGING. WRITE FOR INTERESTING DETAILS.

ORDER FROM YOUR DAIRY SUPPLY JOBBER

★LOW COST!

HAYNES
THE HAYNES MANUFACTURING CO.
709 Woodland Ave. · Cleveland 15, Ohio

SUPPLY AND EQUIPMENT PERSONNEL NEWS

Howard H. Cherry, Jr.

Election of **Howard H. Cherry, Jr.**, as president of CHERRY-BURRELL CORP. announced by H. H. Cherry, Sr., chairman of the board. He succeeds John G. Cherry who continues as member of board of directors. D. H. Burrell, III, resigned as the company's vice president in charge of operations. He, too, remains a member of the board.

The new president has announced the appointment of **David M. Mojonnier** as general sales manager of the corporation. Mr. Mojonnier, a 17-year veteran in the dairy supply industry, joined the company in 1955.

David M. Mojonnier

In other developments at Cherry-Burrell, **Robert J. McClure** has been appointed district manager of the Southeast Sales District of the Cherry-Burrell Corporation.

Seven additions have been made to the DAIRYPAK, INCORPORATED, sales staff. They are: **Charles M. Lindsey, Francis E. Oholendt, Roddy G. Parkman, James M. Risdon, Howard W. Sandy, Edwin M. Shanks, and William E. Wilkinson.**

William Malthesius, Jr., has been appointed director of advertising of FLAV-R STRAWS, INC., Mt. Vernon, N.Y. A seasoned "pro," he was advertising, sales promotion and products manager at Best Foods, Inc. and had previously held other; highly responsible positions.

William Malthesius, Jr.

John W. Johnson, Fred R. Printzlau and **L. J. Claflin** have been named to the sales staff of SOLAR PERMANENT COMPANY, a division of U.S. Industries. They will concentrate on the sale of the Solar MilkMinder bulk milk tank.

Harold J. Kerr has been promoted to Director of Branch Operations of the CREAMERY PACKAGE MFG. COMPANY, Chicago, manufacturers of food processing and refrigerating machinery, J. L. Brazee, vice president of the company, announced.

A. H. Loux

A. H. Loux advanced to assistant manager of RAP-IN-WAX PAPER COMPANY'S INDUSTRIAL DIVISION, Pierson M. Grieve, general manager of the company, announced. He joined the company in 1955 as a sales representative.

Daniel F. Pillow tapped to head the newly-formed service department of the KOLD-HOLD DIVISION, Tranter Manufacturing, Inc., according to announcement by James R. Tranter, president. He also announced Clarence C. Smith's appointment as director of engineering.

Daniel F. Pillow

John F. Connelly elected chairman of the board and president of CROWN CORK & SEAL COMPANY. He succeeds **Russell Gowans** who was elected vice president in charge of the company's western division. Mr. Con-

FOR BULK MILK PICK-UP USE THE *Shorty Tanker*

This is a NEW design of the SHORTY TANKER—IT LOOKS LIKE AND HAS ALL THE FACILITIES OF A STANDARD TANK TRUCK. Built in three sizes: 500, 800, and 1000 gal. capacities. This SHORTY TANKER can serve as your complete bulk handling facility, or, it can be used in addition to your trailerized tanker to make "back road" pick-up, ice cream mix delivery, or emergency pick-up.

SHORTY TANKER mounted on a flat bed truck ready for service

Pump and Motor Compartments—Big doors, easy access, all facilities required.

THE *Schlueter* CO.

JANESVILLE, WISCONSIN

AMERICAN MILK REVIEW WANT ADS

BRING QUICK RESULTS!

When you advertise in the WANTS AND FOR SALE classified section of AMERICAN MILK REVIEW you reach the men who buy. AMR is the only national dairy publication that reaches the owners, managers and buying executives in all milk plants with three or more delivery routes. AMR's complete coverage "pays off" whether you want to buy or sell.

Deadline for Classified Advertising is the 20th of the month preceding publication. Full rate information will be found at the beginning of the WANTS AND FOR SALE Section in the back of the book.

URNER-BARRY COMPANY

Publishers Since 1858

92 WARREN STREET NEW YORK 7, N. Y.

nelly has resigned as president of Connelly Containers, Inc., Philadelphia. to devote full time to Crown Cork & Seal.

Richard C. Niess

With the company since 1944, **Richard C. Niess** has been named manager of refrigeration sales for the industrial division of the YORK CORPORATION, subsidiary of Borg-Warner, it was announced by Ray K. Serfass, industrial division vice president and general manager.

W. H. Harper named merchandising manager of packaging sales, and **M. S. Roll** appointed district sales manager in the southeast for the PAPER CONTAINER DIVISION OF CONTINENTAL CAN COMPANY, W. J. Simons, Division manager of sales staff services has announced.

Harold J. Kerr

MILK BOTTLE CRATE COMPANY, a division of the Stoddard Manufacturing Company, announces that **John M. Biggs** will be east coast sales representative; that **Charles A. Morgan** will be manufacturer's representative in Massachusetts; and that **Benjamin Proctor** will represent the company in the Baltimore—Washington, D. C. area.

Robert F. Lane

Elevated to the executive vice presidency of FISCHER & PORTER COMPANY is **Robert F. Lane.** A 14-year veteran with the Hatboro Pennsylvania instrument firm, Mr. Lane was assistant to the president.

John H. Waechter named sales manager, DAIRY DIVISION, MANTON-GAULIN MANUFACTURING COMPANY, INC., announced D. G. Colony, president. He will direct the developing and marketing of Manton-Gaulin products for the dairy industry.

John H. Waechter

Herbert H. Harris has joined the technical service staff of DIAMOND ALKALI COMPANY'S Chlorinated Products Division. He will concern himself chiefly with Diamond insecticides and the development of new agricultural chemicals.

Paul K. Girton, Girton Manufacturing Company, was elected president of the board of directors of the National Association of Dairy Equipment Manufacturers at NADEM's annual meeting in Florida. Gordon A. Houran, DeLaval Separator Company, was elected vice president.

Mr. Girton succeeds D. H. Burrell, III, retiring president.

At the annual business meeting Mr. Noland of Mojonnier Bros., and James Brazee of Creamery Package Manufacturing Company were elected members of the board of directors. Other members of the board of directors are Emil Howe, Waukesha Foundry Company, Waukesha, Wisconsin and George Huffman, Ex-Cell-O Corporation, Detroit, Michigan.

NEW GIRTON MIXER-BLENDER-CREAMER . .

The Girton M-B-C is the most versatile piece of mixing, blending and creaming equipment ever designed. Its operation is thorough, yet gentle, assuring

- BETTER FLAVOR
- MAXIMUM QUALITY
- IMPROVED TEXTURE
- LONGER SHELF LIFE

You eliminate costly hours and the haphazard results of hand mixing, blending or creaming. The Girton M-B-C delivers a finished product of premium quality in a matter of minutes.

Tilt the tub to transfer the product to another container. Pipe the outlet direct to the filler, if you prefer, and eliminate handling the product.

1. Use the unit complete as is.
2. Lift tub from framework, leaving blades in place, for hand rotating while emptying or filling.
3. Remove blades from tub while it is lifted from framework for filling or emptying.
4. Remove blades for hand scooping while tub is on framework.

GIRTON MANUFACTURING CO.,

MILLVILLE, PA. ——— Write for Bulletin

Product News

New Composite Sample Box on Market

MUCKLE MANUFACTURING COMPANY has introduced a new, heavy-duty galvanized steel composite

box with a key-hold lock system and front drop door with supporting ledge arrangement. In the key-hold system, the key cannot be pulled out of the keyhole while the mechanism is unlocked.

Designed to hold two sample bottles, the box measures six inches wide, eight inches high and four inches deep.

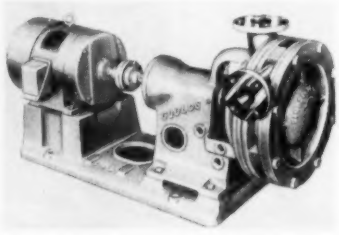
For information: Muckle Manufacturing Company, Owatonna, Minnesota.

●

Glassed Pump Resists Acids

GOULD PUMPS, Inc., and the Pfaudler Company have developed a glassed centrifugal pump said to be completely inert to all common acids except hydrofluoric. Even at high temperatures all acids except hydrofluoric and concentrated phosphoric leave working surfaces unaffected. Glass surfaces of the pump are also immune to the corrosive action of all alkalis up to pH 12 and temperatures up to 212 degrees F.

All parts coming in contact with the liquid being handled are glassed and easily cleaned. The glass is permanently fused to the metal pump parts so that the glass and the metal interlock mechanically and form an inseparable bond. The glassed pump will withstand quick changes of temperature of the liquids handled up to 200 degrees F. differential. Since glass has no catalytic or contaminating effect, there is no possibility of side reaction



or contamination. The pump permits easy cleaning between cycles.

For information: Goulds Pumps, Inc., 32 Black Brook Road, Seneca Falls, New York.

●

Big Truck Body on One Rear Axle

A 1,900 GALLON ice cream truck body mounted on a single rear axle chassis has been developed by the Herman Body Company. The company claims this is the first time a body of this size has been mounted on a

single rear axle chassis. The body can be fully loaded with ice cream, novelties or frozen food and still stay within the 18,000 pound rear axle law limit.

Mounted behind a 1957 Ford Tilt Cab, the truck's standard equipment includes three curb side doors and a roof rack with access ladder mounted on the rear of the body. Refrigeration is supplied by holdover plates and two three-horsepower condensing units.

For information: Herman Body Company, 4400 Clayton Avenue, St. Louis 10, Missouri.

●

Milk Vender Sells Two Quarts at a Time

A VENDING MACHINE, developed by the Jennings Company, will dispense one quart at a time or two quarts simultaneously. Called the Duo-Vender, the machine performs the functions of two machines. It holds 140 quarts. This feature gives the dairy a machine that will sell 140 quarts

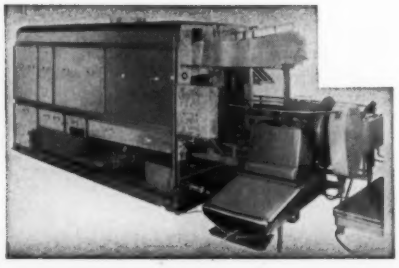
either one quart at a time or 70 half gallons in the form of two quarts simultaneously.

The machine has two coin receptacles. A coin dropped in the chute releases one quart of milk. The correct number of coins dropped in the other chute, which leads to a coin accumulator, will release two quarts of milk.

The machine will accommodate any type of carton.

For information: Jennings & Company, 4311 West Lake Street, Chicago 24, Illinois.

NEW! MODERN! EFFICIENT! ECONOMICAL!— THE *Kendall*



150° AUTOMATIC DUMPING SYSTEM

LESS INITIAL INVESTMENT . . . LESS SPACE REQUIRED . . . LESS EQUIPMENT TO MAINTAIN

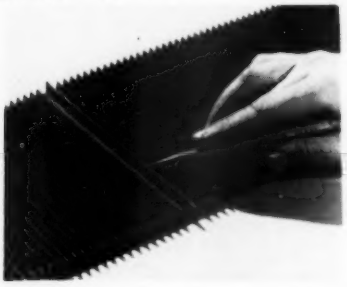
PROVIDES—

Greater sanitation . . . Better control . . . More accurate composite samples . . . Less operator fatigue . . . Less steam required to operate . . . Less power required (One Power Unit) . . . Fewer wearing parts . . . Plus the regular features which have made KENDALL WASHERS the watchword of the Dairy Industry for over 29 years.

KENDALL-LAMAR CORP. • POTSDAM, N. Y.

Conveyor Carries Light as Well as Heavy Packages

LIGHTWEIGHT PACKAGES can be carried as firmly as heavy cartons on a new ribbed package conveyor developed by the B. F. Goodrich



Industrial Products Company, Akron, Ohio.

Called "Griptite," it is especially designed for steep-angle conveyor operations in warehouses and shipping rooms that handle both light and heavy merchandise packages. Having no rough surfaces to accumulate dirt and dust, it features self-cleaning action. As the belt travels around the pulleys, the ribs fan out and release any spillage that has fallen into the grooves.

●

Open Top Surge Tank

A NEW open-top surge tank is announced by Alonzo P. Saucier, president, Charles Saucier & Son, Inc.

The tank is of vertical construction and is said to be easily cleaned because of its wide radius and cylindrical shape. The two-piece cover is designed to fold back in half or to be completely removed as desired.

While made in standard models, the tank can be built to the customer's specifications.

For information: Chas. Saucier & Son, Inc., 2306 West Broadway, Minneapolis 11, Minnesota.

●

A New Corrosion Resistant Coating

WITH THE BASIC research on epoxy resins as background, the Steelcote Company has developed a coating for steel that is said to be highly resistant to corrosion.

With this new product, Epo-Lux Zinc Rich Zinc Dust Primer, it is possible to apply a 90 percent pure zinc metal coating with brush, spray or roller. This percentage of zinc has been found to give the maximum electro-chemical cathodic protection. Now, large equipment and metal structures may be field galvanized at low cost.

For information: Steelcote Manufacturing Co., 3418 Gratiot St., St. Louis 3, Missouri.

●

Truck Manufacturer Introduces Automatic Transmission

TRANSMATIC DRIVE, a fully automatic six-forward-speed transmission for medium through extra heavy duty trucks, has been developed by the Ford Motor Company. Major advantages, according to the manufacturer, are: hydraulically cushions the entire drive line from shock loads, simplifies driving, high torque capacity for starts under the heaviest loads, prevents engine lugging, lowering upkeep and reducing down time, torque converter lockup feature eliminates hydraulic slip except when starting, and a built-in retarded, operated by floor pedal, multiplies engine braking power, permitting downhill driving in greater safety without playing the brakes.

For information: Ford Division, Ford Motor Company, P. O. Box 638, Dearborn, Michigan.

E-Mac Seals Save You Money!

MILK SEAL
Packed 12 to Box

CREAM SEAL
Packed 36 to Box

Available plain or duck impregnated

A new, improved Neoprene Seal for use on De Laval Hot or Cold Cream Separators and Milk Clarifiers. E-Mac Seals last longer — need replacement less frequently.

Look for the trademark "E-Mac in the oval" on every seal — it's your guarantee of a better seal. Order a trial supply now.

Write for catalog showing our complete line of DAIRY BRUSHES and SUPPLIES.

E-Mac DAIRY BRUSH CO., INC.
READING • PENNSYLVANIA

HAYNES Carry-Baskets

with the NEW
*CUSHION GRIP HANDLES
promote
Dairy Product Sales

Bottled milk becomes "so easy and safe to carry"

LOW COST

LIGHT WEIGHT
STURDY
ALL WELDED
CONVENIENT
HANDY
EASY TO CARRY
RUST PROOF
(SPECIAL BRIGHT ALUMINUM COATED FINISH)
ATTRACTIVE

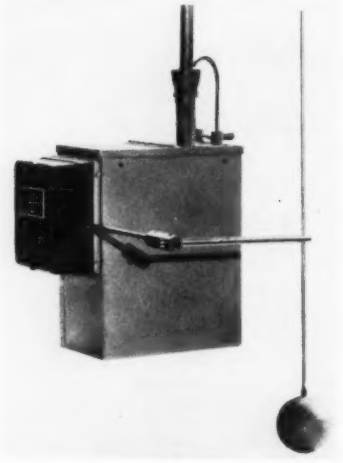
8 STOCK SIZES

Model	Size	No. Packed to Carton	Shipping Wt. Per Carton
4 S	4 Sq. Quart Bottles	10	7 lbs.
6 S	6 Sq. Quart Bottles	6	6 lbs.
8 S	8 Sq. Quart Bottles	6	7¼ lbs.
4 R	4 Rd. Quart Bottles	10	8 lbs.
2-½ SR	2 Sq. or Rd. ½ Gal. Bottles	10	7 lbs.
4-½ SR	4 Sq. or Rd. ½ Gal. Bottles	6	7¼ lbs.
2-½ O	2 Oblong ½ Gal. Bottles	10	7 lbs.
4-½ O	4 Oblong ½ Gal. Bottles	6	7¼ lbs.

THE HAYNES MANUFACTURING CO.
709 WOODLAND AVENUE • CLEVELAND, OHIO

Automatic Water and Feeder Regulator

An automatic water treatment feeder and bleed off regulator for control of mineral scale, corrosion, slime and algae in cooling water used for refrigeration, air conditioning, Diesel engines and other cooling needs has been developed by the Heller Laboratories. Called Hydrotro, the device regulates water treatment according to



the amount of water evaporated from a cooling water system instead of by constant volume chemical feed and bleed off methods commonly used heretofore.

The manufacturer says it will save labor, water, chemicals and will assure low maintenance cost, high efficiency and long life for cooling systems through automatic control of mineral scale, corrosion, slime and algae in cooling water.

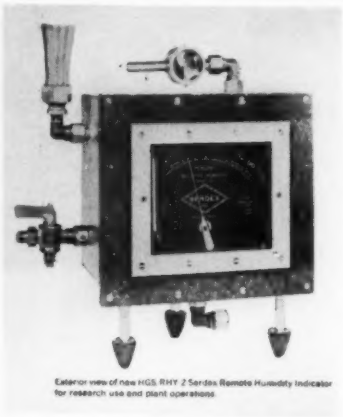
For information: Heller Laboratories, Inc., 124 Fort Lee Road, Leonia, New Jersey.

●

Humidity Indicator

A NEW Remote Humidity Indicator, designed for measuring humidity of closed areas is now available for use in the laboratory, for research and in plant operations.

Remotely placed, the Indicator is connected with the area to be tested by a vacuum pump or line which draws the air samples to the indicator. Only two connections are used, one from the inlet at the bottom of the indicator



Exterior view of new HGS RHY 2 Serdex Remote Humidity Indicator for research use and plant operations.

case to the air line from the container or area sampled, the other from an outlet at the top of the case to a vacuum pump or line.

Readings to a guaranteed accuracy of plus or minus 1½% are obtained directly from the large, legible dial.

For information: Serdex, Inc., 91 Cambridge Street, Boston 14, Mass.

●

Single-Service-Packaged Sanitizer Is Offered

AN EFFERVESCENT tablet form of Heliogen (R), a diatonic iodine sanitizer, has just been introduced by S. B. Penick & Company, New York. It reduces the preparation of a sanitizing solution to the simple step of dropping a tablet into water.

Packaging of the tablets in individually-sealed, moisture-proof aluminum foil is the latest development in the marketing of this revolutionary product. The special packing insures stability and provides an economical product requiring minimum storage space.

Effective in hard or soft water, the tablet releases powerful diatonic iodine which destroys bacteria, viruses, and fungi within 15 seconds. Non-toxic, non-corrosive, non-irritating to the skin, it leaves no odor, taste, or film. Exact dosage is another advantage of the tablet form—each tablet releases

the exact amount of diatonic iodine required for 2½ gallons of solution.

For information: S. B. Penick & Company, Sanitizing Products Division, 50 Church Street, New York 8, N. Y.

●

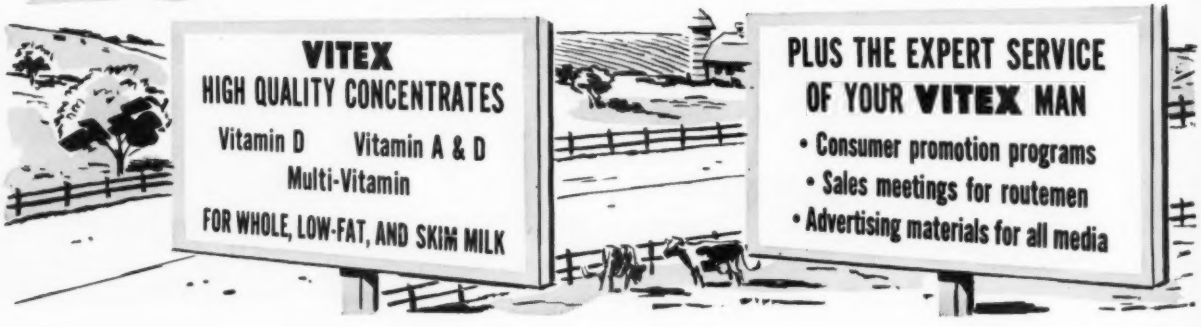
Cottage Cheese Premium Has Many Uses

GLITTER MUGS, 10-ounce cottage cheese containers, colorful, cleanable and attractive, have been developed as a premium item by the Peoria Plastic Company. Other features of the mug are durability and assurance against

snapping, cracking or popping. They can be promoted for use in kitchen, bathroom, lunchbox, automobile, picnic basket or as refrigerator jars.

The Glitter Mugs come in six different colors, accented with tiny silvery

THE HIGHROAD TO GREATER DAIRY PROFITS



flakes imbedded in the translucent polyethylene. The cottage cheese is packed and the lid affixed with standard dairy line procedure and equipment. The dairy's label can be attached to the lid.

The company's promotion package includes retail and wholesale pieces, newspaper mats, and radio and television material.

For information: Peoria Plastic Company, 215 Taylor Avenue, East Peoria, Illinois.

●

New Liquid Detergent

A NEW LIQUID DETERGENT designed for use in solution lifting steam guns and self-generating steam cleaning equipment, has just been introduced by Oakite Products, Inc., manufacturers of industrial cleaning materials and equipment.

Developed to simplify the preparation of steam cleaning solution and to reduce the clogging of coils in self-generating equipment, it will handle a wide variety of steam cleaning operations ranging from light to medium-heavy duty. Oakite LSD is said to provide effective soil removal at concentrations of one to two ounces to each gallon of water as delivered by the gun. Used as recommended, it is claimed to be safe on steel, brass, and magnesium and to have no effect on painted surfaces.

For information: Oakite Products, Inc., 157 Rector Street, New York 6, N. Y.

●

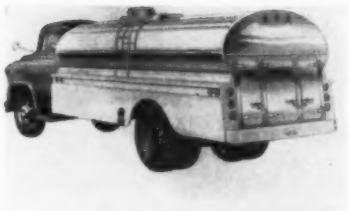
Bulk Milk Pick-up Truck Tank

A NEW LINE of bulk milk pick-up truck tanks, trade-named Kari-Kool, has been introduced by the Dairy Equipment Company, Madison, Wisconsin.

The new Kari-Kool truck tanks have a lower center of gravity and more uniform weight distribution for better roadability and safer driving, says Charles Albrecht, company president.

He said the tank has both light weight and great strength, resulting in bigger payloads hauled at lower cost.

All mechanical equipment is mounted



off the floor in the 3-compartment stainless steel cabinet for easier cleaning. The flush-fitted stainless steel doors are sealed air-tight with a one-piece, snap-on, hollow-tube rubber gasket.

For information: Dairy Equipment Company, Madison, Wisconsin.

●

A Transmission That Reverses

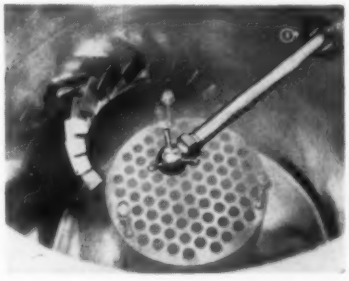
A REVERSING transmission—the new S-N Model 5201—has been developed by the Snow-Nabstedt Gear Corporation, Hamden, Connecticut. It is designed to assist engineers and

others who need a small, single unit for industrial equipment combining forward, neutral, reverse and speed reduction, transmitting up to 28 hp and reversing under full load. Information about the transmission is available in a booklet describing the advantages of the unit, which eliminates separate reduction gear, reverse unit, clutch and mounting brackets.

For information: The Snow-Nabstedt Gear Corporation, Hamden, Conn.

Stationary Spray Cleaner For Vacuum Pans

A STATIONARY SPRAY SYSTEM called Shurespray has been developed by the Diversey Corporation for spray cleaning vacuum pans and evaporators. According to the company a Shurespray system virtually



eliminates maintenance or stoppage of the cleaning unit because there are no moving parts. Th piping system, through which cleaning and disinfecting solution is pumped, is connected to the fixed spray units mounted inside the equipment to be cleaned.

Once the system and the spray heads have been installed properly, they require no further adjustments, reports Diversey.

For information: The Diversey Corporation, 1820 W. Roscoe Street, Chicago 13, Ill. Ask for bulletin 996.

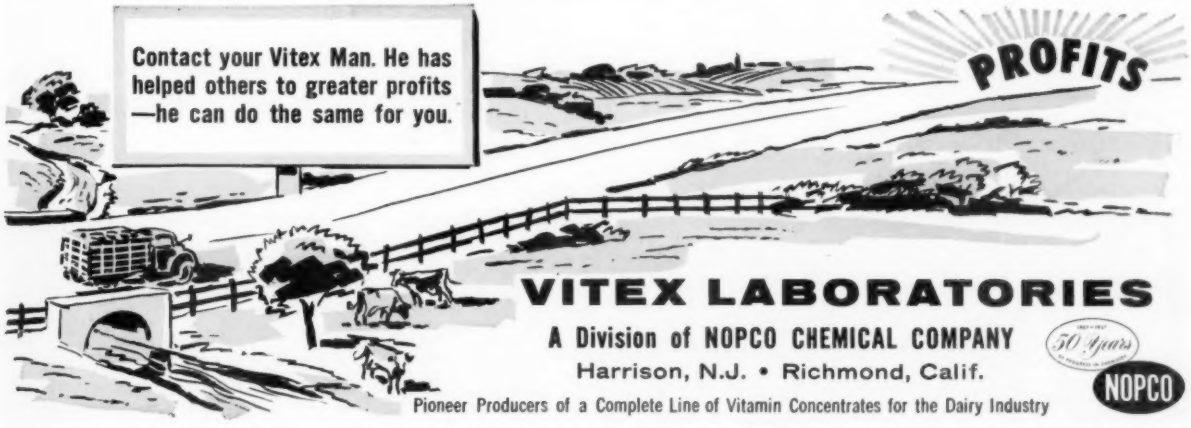
●

Norris Vender Accommodates Both Glass and Paper

Design modifications by engineers at Norris Dispensers, Inc., have made it possible to use glass bottles as well as cartons in the Norris milk vending machine, announced R. V. (Bob) Hansen, vending division sales manager.

With the modifications, the Norris Milk Vender will accommodate one-third quart, half-pint and pint cartons plus eight different styles of glass bottles, including both round and square one-third quarts and half-pints.

For information: Norris Dispensers, Inc., 2720 Lyndale Avenue South, Minneapolis 8, Minnesota.


Contact your Vitex Man. He has helped others to greater profits —he can do the same for you.
PROFITS
VITEX LABORATORIES
A Division of NOPCO CHEMICAL COMPANY
Harrison, N.J. • Richmond, Calif.
50 Years
NOPCO
Pioneer Producers of a Complete Line of Vitamin Concentrates for the Dairy Industry

Classified Opportunities

EQUIPMENT — SERVICES — PERSONNEL — ETC.

To ensure appearance of your ad in a given issue, copy should be in our hands by the 15th of the previous month (i.e.: copy in by October 15th for November issue).

FOR SALE OR EXCHANGE (BUSINESS MACHINERY AND SUPPLIES), WANTED TO BUY, BUSINESS OPPORTUNITIES, SALES PROMOTION, ETC.

Lightface, per word.....$ .10 **Boldface, per word.....$ .15**
Minimum Charge ..... 2.00 **Minimum Charge 3.00**

HELP OR POSITION WANTED

Lightface, per word.....$ .05 **Boldface, per word.....$ .10**
Minimum Charge ..... 1.00 **Minimum Charge 2.00**

BOX NO., DOMESTIC (additional)....$ .50 **BOX NO., FOREIGN (additional).....$1.00**

(In counting the number of words, please remember to include the address. This applies also to box numbers.)

DEADLINE—10th of the month preceding publication. PUBLISHED first of the month. ***No classified advertising will be accepted to run with borders or special spacing. All such advertisements are considered "Display" advertising and will be billed at regular display advertising rates. (Rates and mechanical requirements on request.)***

NOTE: Names and addresses of advertisers using blind addresses cannot be furnished direct from this office. Write to Box Number (as indicated), care of American Milk Review.

NOTICE: The publisher disclaims any responsibility for the reliability of parties advertising in our Classified Opportunities Section, or for the truthfulness of statements made in such advertisements. In answering such ads, ask for references if parties are unknown personally, before sending money. Our readers are requested to assist us in keeping unreliable parties from advertising by reporting suspicious dealings.

We reserve the right to refuse to accept advertisements which we believe are detrimental to the dairy industries.

EQUIPMENT FOR SALE

USED EQUIPMENT FOR SALE ! ! ! USED WOODEN CASES: 24 tall square ½ pints. 20 squat square ½ pints, 20 square pints, 12 square quarts, 6 square ½ gallons, 4 square gallons. USED WIRE CASES: 30 tall square ½ pints, 12 square quarts, 12 square cream top quarts, 6 square ½ gallons. USED BOTTLES: 48mm square pints, quarts, 56mm tall square ½ pints, pints and quarts. 8 and 16 ounce jars with 2⅜" cap seats. USED THERMOMETERS: Cold milk Recorder with short bulb,—No. 1600 chart, Sentinel Recorder with 28" stem, 31" stem and 24" stem Recorders, Foam Heater Thermometers and 28" stem indicating Thermometers. USED EQUIPMENT: C.P. 26 Filler and Capper, C.B. 24 valve FILLER and Capper, C.B. Model 61 Filler and Capper, Meco Foot Operated Can Filler, 4CPM Rotary Can Washer, 200 gallon Receiving Vat, 70 gallon Dump Tank, 24 bottle carver tester, C.B. 200-gallon Pasteurizer, Illinois Creamery 200-gallon Pasteurized, 300-gallon Sterilne Pasteurizer, Bagby Model D-1 Cheese Filler, United Metal Seal Auto Cheese Filler, Schlueter Separator Disc Washer, C.B. 36 tube 6-foot Surface Cooler, Damrow 150-gallon Cheese Vat, 3 ton Vilter Pak Ice Storage Bin, Continental Model O Soaker Washer through round or square ½ gallons, C.P. 375 lb. NR Churn, 1 lot used fittings, 1 lot used motors, 1—1000 lb. Toledo Scale and Weigh can, 72mm hand Capper. Write to: STUART W. JOHNSON & COMPANY, 611 Main Street, Lake Geneva, Wisconsin. AMR-7-57

800 used Barker No. 308 Wire Jug CASES. Hold 5 round gallon jugs. Good condition. Price $1.00 each f.o.b. Elgin, Illinois. Write to: WEST DAIRY EQUIPMENT COMPANY, 356 Willard Avenue, Elgin, Illinois. AMR-7-57

Vending Truck ¾ ton Ford Automatic transmission, 2 H.D. Plates, just like new. 2 Side and Rear door. Light on side. Write to: GNAGEY'S DAIRY, Meyersdale, Pennsylvania. Phone ME 4-6231. AMR-7-57

Three 1953 Heil milk tankers, single axle, 3,200 gallon capacity. Excellent condition. 8 months in operation. Will accept best offer. Frank Tucci, Hatboro, Pa. Phone OSborn 5-8700 AMR-7-57

FOR SALE: One Model AP. Mojonnier-Dawson automatic paper FILLER. Available immediately. Write to: CHESTER CITY DAIRY, Chester, Illinois. AMR-7-57

EQUIPMENT FOR SALE

DOUBLE DRUM DRYERS: 2—42" x 100", 32" x 52", 24" x 36"; EVAPORATORS: Buflovak No. 6.5-29D S. S. Double Effect, Arnold type 316 S. S. 1133 sq. ft. Double Effect; S. S. Truck Tank 3590 gal.; STORAGE TANKS: 50 can Pfaudler, 120 can insulated, 329 can insulated; CB 400 gal. VISCOLIZER; York 12½ x 14½ Ammonia COMPRESSOR 125 tons. Write to: PERRY EQUIPMENT CORPORATION, 1409 N. 6th Street, Philadelphia 22, Pennsylvania. AMR-7-57

Model 125 CGD, 200 "E" & 500 CGD Manton-Gaulin HOMOGENIZERS. Rebuilt and in Excellent Condition. Guaranteed. Write to: OHIO CREAMERY SUPPLY COMPANY, 701 Woodland Avenue, Cleveland 15, Ohio. AMR-7-57

Vilter Pak-Icers and Motors, good condition, 1—6-Ton, 1—5-ton. Write to: DINSMORE DAIRY COMPANY, Jacksonville, Florida. AMR-7-57

FOR SALE—10,000 lb. York Short Time PASTEURIZER; 100 to 500 gallon S.S. PASTEURIZERS; Jensen S.S. Cabinet COOLERS, 3 and 4 wings; 20 and 40 H.P. Packaged BOILERS; 4 to 12 Wide Soaker Type Bottle WASHERS; 7 and 10 Valve Cherry-Burrell FILLERS for 38 mm. Dacro Bottles; 7,000 lb. DeLaval "Air-Tight" SEPARATOR; DeLaval CLARIFIERS, 4,000 to 20,000 lbs. capacity; 125 to 1500 gallon HOMOGENIZERS or VISCOLIZERS; 500, 750 and 1000 lb. Receiving UNITS; Oakes & Burger Rotary Can WASHER, 6 C.P.M.; Straitaway Can WASHERS, 8 and 12 C.P.M.; 350 gallon Jensen Vertical Coil VAT; 3 ft. and 5 ft. Mojonnier Vacuum PANS; 3200 gallon Stainless Steel Truck TANK. Many other desirable items "Reconditioned" or "As Is"—send us your inquiries. Write to: LESTER KEHOE MACHINERY CORPORATION, 1 East 42nd Street, New York 17, New York. AMR-7-57

5 H.P Brunner Freon COMPRESSOR $400.00; Freez King soft ice cream FREEZER $500.00; 4 x 4 Frick Ammonia COMPRESSOR and 7½ H.P. motor $400.00; 10 gallon Emery-Thompson Batch Ice Cream FREEZER $450.00; Ingersoll Rand Motor PUMP 1½ H.P. $150.00. All items in good condition. Will accept any reasonable offer. Write to: Box 59. AMR-7-57

One Cherry-Burrell, 120 bottles per minute, Milk FILLER, all stainless steel bowl and frame, Model K-24, vacuum type, complete with 3 Ph., 220 volt motors, purchased March, 1949. Replaced with larger machine, $1200.00 F.O.B. Binghamton, New York. Write to: CROWLEY'S MILK COMPANY, INC. Binghamton, New York. AMR-7-57

EQUIPMENT FOR SALE

FOR SALE — 42" x 120" American Double Roll DRYER used on edible milk; (2) 42" x 100" Buflovac Double Roll DRYERS used on edible milk; (2) 4,000 gallon S.S. Milk Holding TANKS, 3,200 gallon S.S. demounted Truck TANK for inside storage; (3) Truck TANKS 2,800-3,600-3,750 gallons all on semi trailers; Ste-Vac SV-8 PREHEATER; Henzey 30,000lb/hr PREHEATER; 14,000lb/hr PREHEATER; (3) Vacuum PANS, 36" Rogers—48" Mojonnier—72" Rogers; (2) 1,075 gallons HOTWELLS; (2) 1,250 gallons HOTWELLS; Buflovak 6.5-29-D Double Effect EVAPORATOR. 300 gal. S.S. in and out Pasteurizing VAT; (5) Cabinet COOLERS, various sizes; (2) Sharpless S.S. bowl SEPARATORS 12,000lb/hr.; 200 to 1,000 GPH HOMOGENIZERS; ¼ lb. and 1 lb. Morpac Butter Wrappers. Numerous additional items. Write to: BEST EQUIPMENT COMPANY, 1737 Howard Street, Chicago 26, Illinois. AMbassador 2-1452. AMR-7-57

MILK STORAGE TANKS: 2—1000-gallon Stainless Steel Horizontal storage tanks—$2000.00 each. 1—450 gallon Stainless Steel Rectangular storage tank . . . $800.00. **REBUILT HOMOGENIZERS:** 1—1000-gallon Model E. Gaulin . . . $2750.00. 1—500-gallon Model CGD Gaulin . . . $1800.00. 1—300-gallon Model CGD Gaulin . . . $1600.00. 1—300-gallon Model E Gaulin . . . $1600.00. 1—200-gallon Model E Gaulin . . . $1500.00. 1—125-gallon Model CGD Gaulin . . . $750.00. **ICED BUILDERS:** 2—Model No. 610 King Zeero—10200 lbs. . . . $2000.00 each. 1—Model D 2000 lbs. . . . $1200.00. 1—Model C 1500 lbs. . . . $800.00. **ICE CREAM EQUIPMENT:** 1—150-gallon Model V.I.D. continuous freezer. 1—5½ x 5½ Howe ammonia compressor. 1—Bagby 3-flavor filler. 1—Carrier Hardening room blower coil. A complete set-up for ice cream . . . $6000.00 Write to: DAVIS SUPPLY COMPANY, 2134 S. Saginaw Street, Flint 3, Michigan. Phone CEdar 2-4174. AMR-7-57

USED MILK TRAILERS—1—3000 gallon 2 compartment Heil $2750.00. 1—3500 gallon Heil tandem on new Reyco. 1—4000 gallon completely rebuilt Heil on New Reyco, new guaranteed, new tires. Write to: BRUCE E. HACKETT COMPANY, 1400 Kansas Avenue, Kansas City 5, Kansas. Phone: MAyfair 1-2363. AMR-7-57

Complete receiving units includes can WASHERS, SCALES, Weigh CANS, and drop TANKS. Various size roll DRYERS, one 10-can PASTEURIZER. 1—20 can PASTEURIZER. 1—6' S.S. Rogers Vacuum PAN complete. Write to: L.L. CHAFFEE, Morrisville, Vermont. AMR-7-57

AUGUST FEATURE
BUTTERMILK

SELL YOUR *OWN* BRAND NAME

with the only 12 month plan complete with
Service on product . . . Service on packaging . . . Service on merchandising.

For further information write, wire or phone the
G. P. GUNDLACH & CO. *"Servants to the Dairy Industry"*
BOX A • STATION N • CINCINNATI 3, OHIO

EQUIPMENT FOR SALE

1—Moore Billing MACHINE, 2 or 3 copies, Like New. 2—25 ft. lengths steam HOSE. With water and steam mixers. 1—Schlueter power pipe WASHER. New. 1—Lot sanitary Pipe, Valves, and fittings. 1—10 ft. 1—6 ft. Roller CONVEYOR, cans or cases. 1—¾ HP air COMPRESSOR. 1—Model AP Mojonnier-Dawson ½ gal. paper FILLER. 1—5 ft. Alum. step LADDER. 1—519 DeLaval cream SEPARATOR. 1—Surface COOLER 24 tinned copper tubes 8 ft. long 1—150 gal. CP Model B PASTEURIZER, stainless complete. 1—165 gal.C-B sq. PASTEURIZER good for holding tank. 1—2 compartment stainless wash SINK. 1—Fairbanks Morse platform SCALE. 1—Chelsea fan 24 inch blade ¼ HP motor, reversible switch. 1—14 inch FAN ⅓ HP motor. 1000 handles for 48 MM JUGS. 1—Case JACK. 250 heavy wooden CASES—use for 12—½-gal. Pure Pak or 20 Ilreco qt. tapered. 1—¼ HP Water PUMP. Write to: HIGHLAND PARK DAIRY, 3029 North 33rd Street, Kansas City 4, Kansas. Or Phone W. J. Milleret, MAyfair 1-1497. AMR-7-57

One Pomona Deep Well PUMP and approximately 70 feet of drop pipe and impellers. Also One Steel water pressure TANK and one butter PRINTER. Writer to: CAMBRIDGE STATE BANK, Cambridge, Minnesota. AMR-7-57

FOR BUTTER PATTIES — WAXED U-BOARDS, 6"x15¼", 16 point double white, $9.00 per thousand or 5⅛"x6⅜", $3.00 per thousand. Samples cheerfully sent upon request. Write to: BORAX PAPER PRODUCTS COMPANY, 350 East 182nd Street, Bronx 57, N. Y. 7-M-57

BOILERS — HIGH PRESSURE. WE CARRY A large selection of ASME National Board high pressure boilers, gas, oil and coal fired, ranging from 10 to 1,000 h.p. Each guaranteed in excellent condition. Sale sheet and complete data sent upon request. Write to: WABASH POWER EQUIPMENT COMPANY, 31 East Congress, Chicago 5, Illinois. 7-M-57

"ELECTROMATIC" FILLERS FOR PURE-PAK—CANCO—SEALING CARTONS. Manual or Fully Automatic Models. TAKE ADVANTAGE OF DIRECT FACTORY BUYING. Write to: THE MOJONNIER-DAWSON COMPANY, 9151 Fullerton Avenue, Franklin Park, Illinois. Gladstone 5-1013. 7-M-57

Grand Rapids Dairy Store fixtures, four years old. Stainless Steel center island type 51 seating capacity. Write to: PERFECTION DAIRY, 5888 Chestnut Drive, Parma 29, Ohio 7-M-57

USED FARM PICK-UP TANKS: 1,500, 1,600 and 1,800-gallon capacity. Most of these are manufactured by the Heil Company but other makes are available. Write for full details. STUART W. JOHNSON & COMPANY, 611 Main Street, Lake Geneva, Wisconsin. 6-M-57

NEW LOW PRICES ON PLUNGER SEALS FOR your C. P. and M. G. HOMOGENIZER. Send for trial offer. Advise style and capacity of homogenizer. Write to: STUART W. JOHNSON & COMPANY, 611 Main Street, Lake Geneva, Wisconsin. 6-M-57

RECEIVING ROOM EQUIPMENT — Complete receiving room equipment consisting of one Lathrop-Paulson 6 can per min. straightaway can WASHER in excellent condition; Lathrop-Paulson S.S. Weigh CAN and receiving UNIT complete with Surge tank and air-operated dump valve; Toledo 1000 lb. cap. springless scale; Mojonnier power chain CONVEYOR; complete unit designed for one-man operation; will sell equipment separately; equipment in excellent condition; must remove from surplus equipment list. Write to: FAIRMONT FOODS COMPANY, 2201 Arapahoe Street, Denver, Colorado. AMR-7-57

EQUIPMENT FOR SALE

QUIRK COLD SEAL CABINETS — for milk storage on Dairy Trucks.. Model No. 314, Capacity 6 cases of Square Bottles. Very good condition. Will sell for $30.00 each. Write to: MAILENDER-BARNETT COMPANY, INC., 427 East Sixth Street, Cincinnati 2, Ohio. Phone PArkway 1-5456. AMR-7-57

1—DeLaval CLARIFIER Airtight No. 226 all stainless steel bowl. 1—Stainless Steel Weigh CAN and Dump TANK 500 lbs. With Fairbanks platform SCALE. Model No. 1124. 1—Bagby Carton Filling MACHINE—Model RLS—½ pt., pt., & qts.—American can cartons. 1—CP Rotomatic Milk Bottle FILLER with accumulating table. 1—Small Heat EXCHANGER 9 tubes 5 ft. x 1 inch stainless steel with steel jacket. Write to: FIRST DISTRICT ASSOCIATION, Litchfield, Minnesota. AMR-7-57

Five Double Roll Milk Dryers. Two water tube portable BOILERS. Five CP Coil VATS, 600 gallons. PUMPS, TANKS and a long list of other pieces of Creamery Equipment. Send for a list of 90 items. Write to: A.E. GROTH, Whatcom County Dairymen's Association, Box 157, Bellingham, Washington. AMR-7-57

Mojonnier-Dawson Model C.P. Hand Operated and Model A.P. Fully Automatic FILLERS, for use with Pure-Pak Preformed Cartons. Also, Model M.T. Ilreco FILLER for Tapered Pure-Pak. **REASONABLE** Write to: BESSIRE AND COMPANY, INC. 6305 Kenjoy Drive, Louisville 14, Kentucky. AMR-7-57

1—Trumbull High Temperature Short Time Electropure PASTEURIZER, 4000 lb. capacity, with York Plates. Write to: THE CHRISTIAN PETERSEN & SON COMPANY, 26 Brook Street, West Hartford 10, Connecticut. P. O. Box 247. AMR-7-57

Model T. J. R-2—3 Wide Cherry Burrell Soaker Type WASHER. Washes ½-gallon oblong bottles, and from ½ gallon size to ½ pint. Also, 600 gallon C.P. Holding VAT with cooling plate, in good condition. Write to: GRADY HAZLEWOOD, 6th & Tyler, Amarillo, Texas. AMR-7-57

Complete set of novelty making equipment in perfect working condition; just replaced by new Gram novelty machine; includes 50 mold Vaden brine tank with mold pusher; Anderson stick machine; Anderson filling machine with Dream-sicle nozzle; Precision bagger and conveyor; chill tunnels, molds and stickholders, etc.; priced to sell as a unit. Write or call BRIDGEMAN CREAMERIES, Grand Forks, North Dakota. AMR 7-57

Flash PASTEURIZER, Walker Wallace 75 Plates, never used, complete, $2000.00. Write to: HAMMER FOOD PRODUCTS CORPORATION, 2 Fountain Avenue, Brooklyn, New York. AMR-7-57

ILRECO LT-20. Replacing wtih larger machine. In fine condition—Very Reasonable. Write to: DA-MAR MEXICO DAIRY, Mexico, New York. AMR-7-57

125 gallon C.G.C. Manton Gaulin HOMOGENIZER (1951). 6—20 Cherry-Burrell FILLER, ½ pint to ½ gallon. L.H. Serial No. 6881 (1953). Electro—E 104 SEPARATOR, S.S. with Clarifier bowl (1953). B Bottle Electric CENTRIFUGE. Contact CORDRAY DAIRY, McConnellsville, Ohio. AMR-7-57

POSITION WANTED

WANTED: 150 to 200 horsepower Scotch Marine BOILER, also Buflovac Spray DRYER. Write to: LANGLE'S DAIRY, Odebolt, Iowa. AMR-7-57

EQUIPMENT WANTED

WANTED TO BUY: USED CASES for square ½-pint, pint, quart, ½-gallon and gallon bottles —wood, wire or aluminum. Write to: Box 57 7-M-57

Late Model Plate COOLER, 100 to 300 gallon. Cold Wall PROCESSOR for buttermilk. King Zeero Ice BUILDER. 6 or 8 Wide WASHER, ½-pints to quarts. Send complete details. Write to: ROBERD'S DAIRY, 2500 Tennessee Avenue, Savannah, Georgia. 7-M-57

WANTED: A good used VISCOLIZER or HOMOGENIZER. Give make, size, condition and price. Write to: Box 56. AMR-7-57

WANTED TO BUY

WANTED TO BUY: SKIM MILK IN TANK LOTS: year 'round supply or surplus deal. Write to: HENRY GALLAGHER, East Diamond Avenue, Hazleton, Pennsylvania. 7-M-57

SERVICES

NO NEED TO STOP PRODUCTION!!! Ceramic tile provides ideal working conditions and sure sanitation and cuts maintenance costs. We possess the know-how for installing ceramic and quarry tile while your plant is in operation. For further information and estimates call or write: THURNBAUER TILE, INC., 1925 West Hampton, Milwaukee, Wisconsin. LOcust 2-4290. 7-M-57

SANITARY VALVES—REBUILT WITH STAINLESS steel for a fraction of the cost of new. Write to: BADGER VALVE REBUILDING COMPANY, Withee, Wisconsin. 7-M-57

INSTRUMENT REPAIR!! Temperature regulators, mercurial indicating thermometers and recording thermometers of all makes repaired. Complete satisfaction guaranteed. Write to: STUART W. JOHNSON & COMPANY, 611 Main Street, Lake Geneva, Wisconsin. 7-M-57

REBUILD THOSE LEAKING VALVES!! SANITARY Valves rebuilt for a fraction of the cost of a new valve. Prices submitted on request. Write to: STUART W. JOHNSON & COMPANY, 611 Main Street, Lake Geneva, Wisconsin. 7-M-57

POSITION WANTED

Production MANAGER or Plant SUPERINTENDENT with progressive independent dairy, preferably located in Northern Ohio or Western Pennsylvania. Married, Bachelor of Science Degree in Dairy Technology, four years experience in all phases of production, both glass and paper operations, two years as working foreman. Write to: Box 58. AMR-7-57

SALES REPRESENTATIVE, east coast only, prefer Maryland, Virginia, Pennsylvania and Washington; calling on dairies, jobbers and distributors; 11 years experience as Sales Manager for large independent dairy; excellent references and sales record, will give complete resume upon request. Write to: WARREN G. SAUNDERS, Rt. No. 1, Edgewater, Maryland. AMR-7-57

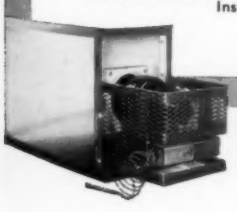
DAIRY PLANT FOREMAN: Thoroughly experienced in all phases of Bottle Milk and manufacturing of Dairy Products. Experience and all questions answered in first letter. Write to: Box 61. AMR-7-57

FOSTER-BUILT BUNKERS

Dependable, Low-Cost Refrigeration

Here's *complete, efficient* reefer refrigeration at LOW COST! Foster-Built Dry Ice Bunkers with Frigi-Matic temperature control maintain positive, *constant* temperature control at all times, assuring big savings in operating costs. Minimum maintenance . . . rugged simple design of Foster-Built Bunkers eliminates repair bills.

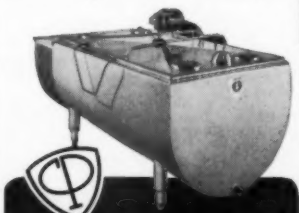
Install Foster-Built Bunkers for increased payloads and profits!



Foster-Built
DRY ICE TRUCK BUNKERS

516 S. Laflin Street, Chicago 7, Illinois

Look for this Sign



MILKEEPER
Reg. U. S. Pat. Off.
BULK FARM COOLING TANKS

AUTHORIZED DEALER
MILKEEPER
BULK FARM COOLING TANKS
Creamery Package

for EXTRA QUALITY AND HELPFUL SERVICE—for you and your patrons

THE *Creamery Package* MFG. COMPANY

Gen'l and Export Offices:
1243 W. Washington Blvd., Chicago 7, Ill.
Sales Branches in 23 Principal Cities

HELP WANTED

WANTED—MANAGER for privately owned Milk and Ice Cream plant in Southwest, over one million sales, Wholesale and Retail routes, located in progressive town of 35,000. Give experience, personal data and qualifications. Permanent position, well established business. Write to: Box 60. AMR-7-57

WANTED — Experienced Laboratory Technician to perform routine farm, control, fluid milk and milk product control. Large modern plant with well equipped laboratory. Top salary for qualified person. Apply—JOHANNA FARMS, Flemington, New Jersey. 7-M-57

BUSINESS OPPORTUNITIES

OUTSTANDING DAIRY—Retail and Wholesale. Southeastern Coastal City, grossing about $600,000 annually. Daily average about 2,700 gallons. Complete refrigerated Fleet. Modern plant in suburbs of city, with Pure-Pak quart and half gallon machines. Business very lucrative showing high net, owner has other interests. Price $130,000, half cash. Write Broker Box 134, Seaford, New York. AMR-7-57

FOR SALE: Northern California Creamery Building, 72 ft. x 36 ft., equipped for manufacturing mix, ice cream, cottage cheese; retail building highway frontage of 315 ft., 7½ acres, modern home, $6,500 down. Write to: W. W. WINNARD, 4184 Woodworth Road, Sebastopol, California. AMR-7-57

FOR SALE: Dairy Wholesale and Retail delivery; modern pasteurizing plant; all equipment new within the last 7 years; 35 acres of land, house, 8 rooms, 2 baths; 2 car garage, stable and garage; good year round business; summer average, 1700 quarts per day; 4 local producers; only pasteurizing plant on island; due to ill health, must sell. Write to: NANTUCKET DAIRY, Box 554, Nantucket Island, Mass. AMR-7-57

SALES PROMOTION

TRUCK LETTERING AND TRADEMARK DECALS made for your truck and store advertising. Easy to apply, uniform, distinctive, economical for large or small needs. Write to: MATHEWS COMPANY, 827 So. Harvey Avenue, Oak Park, Illinois. 7-M-57

FOR RENT

MISCELLANEOUS: MILK TRANSPORTATION tanks for rent on lease basis. Write to: HENRY GALLAGHER, 329 East Diamond Avenue, Hazleton, Pennsylvania. 7-M-57

DECAL TRANSFERS

TRUCK DECALS: — No charge for sketch. Brilliant and Durable: Easily Applied: Write for samples. **ALLIED DECALS, INC.**, 8354 Hough, Cleveland 3, Ohio. AMR-7-57

MISCELLANEOUS

CUSTOMERS received and transferred ANYWHERE, U. S. For details write: MILK ROUTEMAN'S EXCHANGE, P. O. Box 254, New Hartford, New York. AMR-7-57

NDC Program Seeks to Influence Four Major Groups

THE NATIONAL DAIRY COUNCIL and its 88 Dairy Council offices are aiming their educational promotion of dairy foods at four groups having the greatest need for nutritional improvements.

They are: 1) Youngsters in School; 2) Teenagers; 3) Overweights and Underweights; and 4) Adults Over 40. Results from research and surveys have indicated that within these groups are the greatest sales opportunities for the dairy industry and the greatest opportunities for nutrition education through opinion-influencing leaders.

Basic to the educational promotion, designed to improve the nutritional status of these groups and thus increase the use of dairy foods, is NDC's nutrition research program which provides the "reasons-why" milk, ice cream, butter and cheese in balanced quantities with other foods are important in the diet.

The program targets and their importance saleswise to the dairy industry follow:

Youngsters in School

Emphasis here is on the School Lunch and Special Milk Programs. Children in primary and secondary schools represent a market of 39 million consumers.

What's the potential? The Federal program with an appropriation this year of 100 million dollars, presently reaches about one-third of the children in the nation's schools. Dairy Council programming is being intensified to help the schools, parents and industry groups, to realize the expansion this program deserves as a measure for health and education among the other two-thirds of the nation's school children.

A third major program project in the Dairy Council Program concerns the dietary needs of Teenagers. This represents a market of 18 million consumers. In a survey made by Youth Research Institute of New York for NDC it was reported that 94% of boys and girls aged 11 through 18 drink milk. They feel it is nutritionally important. However, their use of milk declines as they go up the teenage ladder. They start identifying themselves with adults who are generally poor milk drinkers.

Here are tremendous opportunities for increased promotion. Research indicates that at least a quart of milk a day should be consumed by most individuals in this important group.

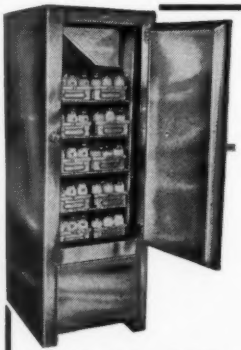
Overweights and Underweights

Thirty million Americans are in varying stages of dangerous overweight and a similar number in varying stages of underweight. Here is a market of 60 million consumers.

In weight control, National Dairy Council has nutrition facts which health leaders can use . . . and do use. From NDC sponsored studies at Michigan State University, it was demonstrated that: "You can reduce safely and maintain proper weight with dairy foods and other every-day foods."

No longer can "quacks" and self-

KVP SPECIALISTS IN Papers FOR THE dairy industry
THE KVP COMPANY
KALAMAZOO • MICHIGAN



The NEW and BETTER Way to Handle Composite Milk Samples
COMPO-COOLER
Successful milk plant managers everywhere are using COMPO-COOLER Sample Bottle Cabinets.
COMPO-COOLER speeds sample handling and affords substantial savings in time and labor.
COMPO-COOLER gives you complete electric refrigeration. Cabinet is lifetime stainless steel. There is a COMPO-COOLER in a capacity, style and size to fit your particular plant needs.
Write today for illustrated booklet and complete details.
COMPO-COOLER COMPANY, Glens Falls 5, N. Y.

appointed diet experts foist on the public "trick" schemes for controlling weight, and go unchallenged by health leaders. Dairy Council now has facts for health leaders.

Adults Over 40

The fourth Dairy Council major program target is Adults Over 40. This group comprises a market of 60 million persons, nearly one-third of the total population. This older age group presents special interests and problems related to degenerative disease. Hence, thought leaders of influence with these age groups are more than ever interested in learning how good nutrition can make its contribution to better health and to longer life expectancy. Health leaders are focusing greater effort than ever before on helping these people enjoy the "golden years."

This group will expand in numbers in the years ahead. It is estimated that there will be more than 75 million people in the United States over 40 years of age by 1965.

A Challege to Industry

What should the dairy industry do to "tie-in" with this Dairy Council Program to capitalize on the market conditioning which Dairy Council provides?

Together, as partners:

1. Greater use of dairy foods can be stimulated.
2. Markets can be held and expanded.
3. A healthier, stronger nation can be built.

●

INTERSTATE MILK

(Continued from Page 85)

laboratory survey officers at the Public Health Service Center in Cincinnati. The same Task Force expressed the opinion that all states should consider reciprocity in the matter of laboratory certification.

Panel discussions brought forth many points of view, including:

- A national agreement should be reached on requirements concerning the use of potable water for condensers;
- Standards for nonfat dry milk to be used in reconstitution into Grade A products are much needed;
- There is some evidence that tuberculosis and brucellosis test programs are so interpreted that they become, in effect, barriers to the interstate shipment of milk.

Participants at the conference called attention to the Interstate Milk Shipper List, published quarterly by the Milk and Food Program of the U.S. Public Health Service. This is a list of interstate milk shippers together with sanitation compliance ratings of their supplies as certified by Milk Sanitation Rating Officers.

●

BULK DISPENSERS

(Continued from Page 68)

Fourteen of the sixteen schools used paper cups, 1 used glasses, and 1 reported use of clear plastic tumblers. Of these using paper cups, ten were using cone shaped cups with holders, three flat-bottom cups and one a combination.

All stated that the paper cups are easily disposed of with normal trash or by burning in the school furnace or in an incinerator.

Cost of Equipment

Milk plant operators have loaned six of the Wisconsin schools the dispensers used, and another rents a dispenser to the school at a rate of 3c per gallon of milk purchased.

Most of the schools bought the equipment outright at prices generally running between $200 and $300. With the help of the federal school milk program, the Wisconsin schools have been able to complete payments in about a year's time.

The most popular cups, the 10-ounce cones, were reported as costing in the neighborhood of $4.00 per thousand, and smaller ones less. Flat-bottomed cups cost $5.00 to $8.50 per thousand. Plastic cup holders were stated to cost from 35c to 50c; stainless steel, from 63c to $1.00.

Service Supplied by Plant Operators

In all the schools with dispensers, interviewers were impressed with the high degree of cooperation extended by the local dairy plant operators. School officials were sure, in every instance, that the dairy was ready to do everything possible to see that the bulk milk programs ran smoothly and successfully.

As has already been seen, six dairies actually gave the schools dispensers. In another case, paper cups have been provided as well. The dairies almost unanimously took on the problems of installing and maintaining the machines. In two out of three cases, route men put new cans into the machines when old ones are emptied, and in the other instances students or custodians appear to be involved—mostly because cans need to be changed at times when route men cannot be on hand. All schools reported that dairies have assumed the responsibility for any repairs that become necessary.

SELL 2 -FOR LESS THAN A PENNY!

COUPLE QUART CARTONS into easy-to-carry half gallons! Plastic TWO-TOTERS snap on quick, hold tight and remove easily from Canco or Pure-pak cartons. Re-usable!

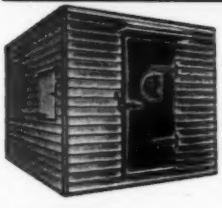
TWO-TOTER

For free sample and price list write to:

MAYFAIR PRODUCTS

Post Office Box 87 Torrance, California

PORTABLE DAIRY STORAGE PLANT



For Lease or Sale
$1.35 Per Day
Also Available for Ice Cream
Expand Sales—Open New Dairy Accounts with ICS Cold Storage Plants

- Cuts cost of delivery . . . dry ice
- Keeps milk fresher . . . longer
- Increases route man's selling time

ICS portable plants hold 300 cases and up. Fully Automatic . . . delivered complete . . . ready to run . . . plug it in for power.

ICS INTERNATIONAL COLD STORAGE
2307 SOUTH OLIVER WICHITA, KANSAS

INDEX OF ADVERTISERS

A	Page
Alloy Products Co.	97
American Can Co.	29
American Dairy Association	8
American Dry Milk Institute	18
American Seal-Kap Corporation	23
Ames Iron Works, Inc.	41
B	
Baldwin-Lima-Hamilton Corp.	12
Barker Equipment Company	50
Batavia Body Co.	83
Benner Glass Co.	18
Boonville Mfg. Corp.	42
C	
Central Cold Storage Co.	93
Centrico, Inc.	55
Cherry-Burrell Corp.	2
Chicago Stainless Equipment Co.	53
Chicago Steel & Wire Co.	89
Clayton Mfg. Co. (Steam Generator Div.)	43
Compo-Cooler Company	114
Copeland Refrigeration Corp.	75
Creamery Package Mfg. Co.	113
Crown Cork & Seal Co.	51
Cumberland Case Co.	3
D	
Dairy Equipment Co.	13, 49
Dairy Pak, Inc.	35
Darnell Corp., Ltd.	88
De Laval Separator Co., The	9, 45
Divco-Wayne Corp.	61
Doering & Sons, C.	105
E	
Edlo, Inc.	92
E-Mac Dairy Brush Co.	109
Ex-Cell-O Corporation (Purepak Div.)	6, 7
F	
Forbes Co., The Benjamin P.	98
Foster-Built Bunkers	113
Frick Co., Inc.	85
G	
General Electric Co. (Appliance Div.)	21
Girton Manufacturing Co.	107
Gundlach Co., G. P.	112
H	
Chr. Hansen's Laboratory	84
Haynes Mfg. Co., The	17, 93, 105, 109
The Heil Co.	65
I	
International Cold Storage	115
International Paper Co.	19
K	
Kari-Kold Company	87
Kendall-Lamar Corp.	108
Klenzade Products Co.	100
King Co. of Owatonna, The	17
Krim-Ko Co.	57

K	Page
Kusel Dairy Equipment Co.	99
KVP Co., The	114
L	
Ladish Co., Tri-Clover Division	117
Lamb Glass Co.	69
Lily-Tulip Corporation	31
M	
Mayfair Products	115
Mid-States Steel & Wire Co.	90
Milk Bottle Crate Co.	39
Mojonnier Bros. Co.	22
Mueller Co., Paul	73
N	
Norris Dispensers, Inc.	10, 11
O	
Ox Fibre Brush Co.	52
P	
Penn-Michigan Mfg. Corp.	56
Pfaudler Co., The	33
Pure-Pak Division, Ex-Cell-O Corporation	6, 7
Purity Pack Corporation	16
S	
Schleuter Co.	106
Sharples Corp.	14
Smith-Lee Co., Inc.	71
Solar Permanent Co. (Division U. S. Industries, Inc.)	118
Solvay Process Division (Allied Chemical & Dye Corporation)	91
S & S Products, Inc.	68
Stoelting Bros. Co.	77
Strahman Valves, Inc.	94
Sun Oil Co.	37
T	
T & H Specialties	86
Thatcher Glass Mfg. Co., The	4
The American Jersey Cattle Club	26, 27
Tranter Mfg., Inc.	102, 103
U	
United Steel & Wire Co.	101
Upco Company	84
V	
Viking Pump Co.	82
Vitex Laboratories (A Division of NOPCO Chemical Company)	110, 111
W	
Want Ads	112, 113, 114, 115
Waukesha Foundry	104
West Carrollton Parchment Co.	81
Western Condensing Co. (Div. Foremost Dairies)	67
Wilson Refrigeration, Inc.	15
Wilson Steel & Wire Co.	82
Wood Co., John Superior Metalware Div.	95
Wyandotte Chemical Co.	79
Z	
Zero Sales Corp.	78

There is no substitute for QUALITY

Ice Cream producers protect product quality with* TRI-CLOVER *Pumps and Fittings

The constant high quality of ice cream products results in continued customer satisfaction and repeat order business. Arden Farms Co. of San Leandro, California, is one of many modern ice cream plants employing Tri-Clover Division's sanitary stainless steel pumps, fittings and valves to protect this vital quality.

Continual research at Tri-Clover has developed exclusive design features that combine a high degree of corrosion-resistance and sanitation with ease of cleaning. At Arden Farms 300 feet of process piping is "cleaned-in-place". This time and labor-saving operation utilizes Tri-Clover pumps and Tri-Clamp® fittings and valves, designed specifically for CIP installations.

Putting quality—real quality—into *our product* is of prime importance at Tri-Clover. Can you afford to give *your product* less consideration?

Let us help you with your piping and pumping problems. Write for descriptive literature.

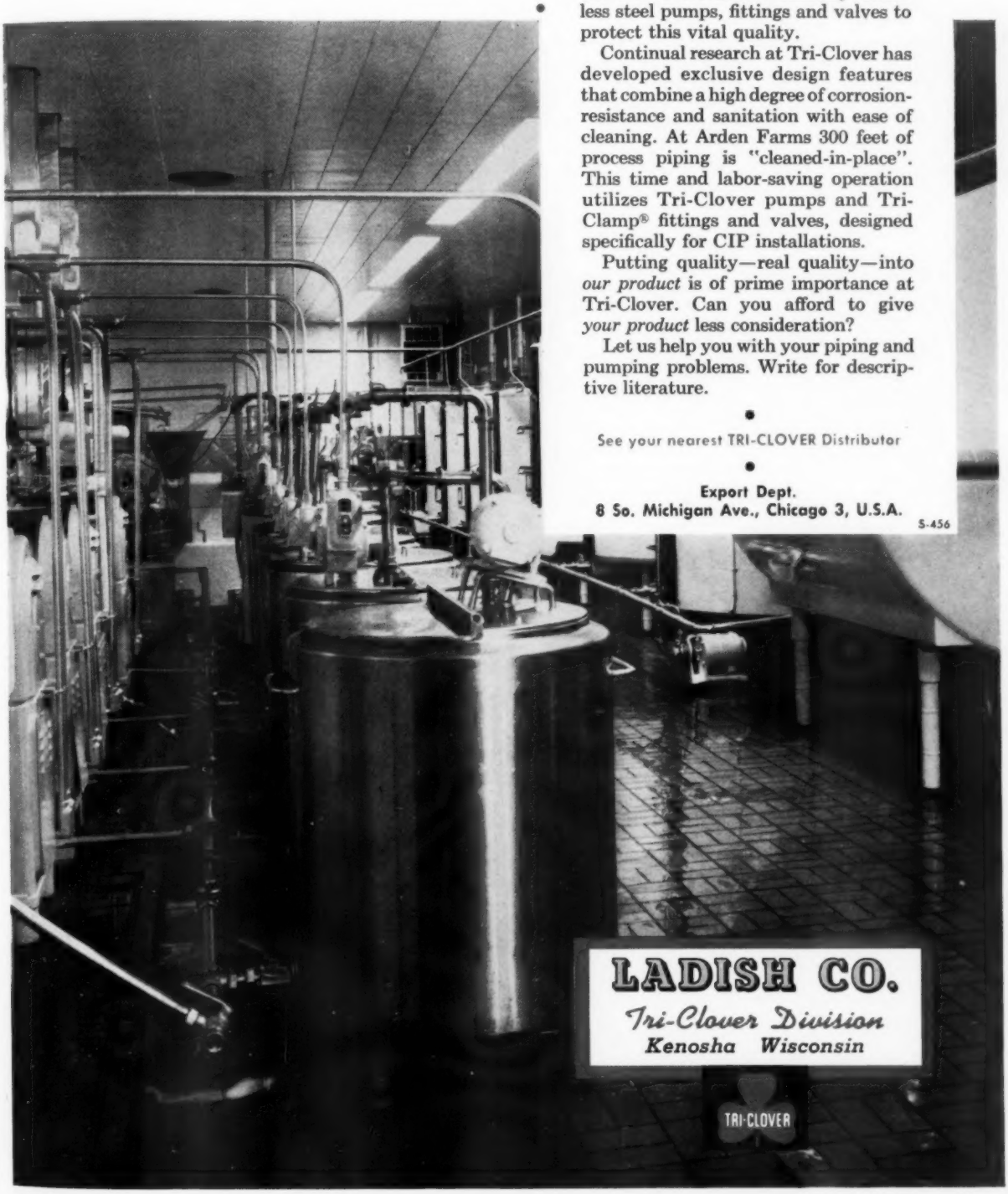
•

See your nearest TRI-CLOVER Distributor

•

Export Dept.
8 So. Michigan Ave., Chicago 3, U.S.A.

S-456



American Milk Review — July, 1957. Published monthly by Urner-Barry Company at 92 Warren Street, New York. Domestic subscription $2.00 per year, Canada and Pan Amer. Union $3.00 per year; foreign $4.00 per year. Accepted as Controlled Circulation Publication at New York, N. Y.

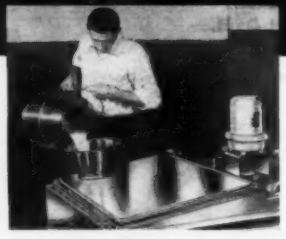
SOLAR Milk Minder

Cradle of accuracy

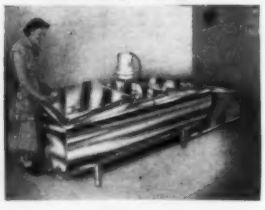
Meets 3A Sanitary Standards

Tested for cooling economy

Pouring's lower



Cleaning's quicker



A tank full of **profitable features**

Front to back—inside and out—the Solar MilkMinder is loaded with profitable and time saving features.

The exclusive all-weather cooling system that cools milk faster, more economically . . . floor hugging design of only 32" from floor to pour . . . stainless steel throughout, makes first cost, last . . . the rugged construction and rounded shape that prevents flexing or bulging assures accurate samples plus many, many more profitable features.

If you want to go bulk profitably . . . go the Solar MilkMinder way.

INVESTIGATE SOLAR'S COMPLETE PLAN FOR BULK CONVERSION NOW!

SOLAR Milk Minder

Solar Permanent CO.
TOMAHAWK, WISCONSIN
division of U.S. Industries, Inc.

Serving Dairy Farmers Since 1865

SOLAR FINANCING PLAN

Going bulk with a Solar MilkMinder is simple and easy.

- NO MONEY DOWN
- 4 YEARS TO PAY
- LOW MONTHLY PAYMENTS

Get the facts today . . . fill in the coupon and return!

Gentlemen:
Please send me the Solar MilkMinder booklet and financing brochure.

Name_____

Address or R.R. No._____

City_____ State_____

7-57-AMR